

Appendix A

Hazardous Waste Management Units

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UNIT NAME	M-1 Treatment Unit
LOCATION	Within Area F, at the northwest corner of the facility. The location of this equipment and the boundary of this waste management unit are shown in Figure IV-1 (Initial).
ACTIVITY TYPE	Storage and Treatment in tanks - consolidation of wastes, neutralization of corrosives, precipitation of metals, chemical oxidation of organics, low levels of sulfides, and low levels of cyanides, phase separation, and hexavalent chrome reduction.
ACTIVITY DESCRIPTION	<p>The M-1 treatment unit is a batch treatment system that primarily is used to treat waste to reduce hexavalent chromium, precipitate metals, and separate oil and water emulsions. The resultant treated aqueous phase may be discharged to the LACSD after further treatment in other on-site units (when required) and testing and approval in the Batch Discharge Tanks. M-1 is also used to consolidate wastes, including waste acids, prior to storage or treatment in other on site treatment units or shipment off site.</p> <p>When M-1 is treating a batch that is not a soluble oil or emulsion, the treatment regimen includes reduction of hexavalent chrome, oxidation of organics and low levels of sulfides and cyanides, neutralization, and precipitation of metals. After neutralization, the primary product is a slurry of water and precipitated solids. After neutralization, the entire batch may be transferred to other on-site treatment units, or solids may be allowed to gravity settle in M-1, with the separated supernate and settled solids phases then transferred to other on-site treatment units.</p> <p>When M-1 is treating a batch to separate soluble oils from emulsions, the treatment regimen includes addition of acid to reduce the pH, and/or the addition of other de-emulsifying reagents. M-1 is then allowed to stand so that the oil layer can separate by gravity. After gravity separation, the aqueous layer is decanted to other on site treatment units. The remaining oil layer is then transferred to other on site treatment systems, or neutralized with caustic in M-1 prior to pumping to other on site units.</p> <p>Wastes may be removed from Tank M-1 at any stage of the treatment process for storage or treatment in other on site</p>

	systems, or for shipment off site.
PHYSICAL DESCRIPTION	The M-1 system consists of: Tank M-1 and ancillary equipment. Tank M-1 is an above ground, 15,175 gallon, FRP, cone bottom tank.
MAXIMUM CAPACITY	Tank M-1 has a maximum storage capacity of 15,175 gallons. The throughput capacity is determined by the actual waste being treated and is not a fixed value.
WASTES COME FROM	Wastes come to this unit from: M-2 Treatment Unit M-11 Treatment Unit F-501 Treatment Unit F-502 Treatment Unit Wastewater Physical Separation Unit Wastewater Polishing Unit Batch Discharge Tanks Storage & Treatment Tanks Acid Bulk Receiving & Storage Tanks Container Receiving & Inspection Unit Container Storage Unit West Railcar Loading & Unloading Unit Loading & Unloading Rack for Bulk Liquids other than Acids (pH \geq 4 only) Bulk Acid Loading & Unloading Rack (pH \leq 10 only) Off-site Generators
WASTE GO TO	Waste Oil from M-1 can go to the: M-2 Treatment Unit M-11 Treatment Unit F-501 Treatment Unit F-502 Treatment Unit Storage & Treatment Tanks Container Storage Unit West Railcar Loading & Unloading Unit Loading & Unloading Rack for Bulk Liquids other than Acids (pH \geq 4 only) Bulk Acid Loading & Unloading Rack (pH \leq 10 only) Off-site Treatment and/or Disposal Supernate from M-1 can go to the: M-2 Treatment Unit M-11 Treatment Unit

	<p> F-501 Treatment Unit F-502 Treatment Unit Wastewater Physical Separation Unit Wastewater Polishing Unit Batch Discharge Tanks Storage & Treatment Tanks Acid Bulk Receiving & Storage Tanks Container Storage Unit West Railcar Loading & Unloading Unit Loading & Unloading Rack for Bulk Liquids other than Acids (pH ≥ 4 only) Bulk Acid Loading & Unloading Rack (pH ≤ 10 only) Off-site Treatment and/or Disposal </p> <p> Solids & Sludges from M-1 can go to the: M-2 Treatment Unit M-11 Treatment Unit F-501 Treatment Unit F-502 Treatment Unit Storage & Treatment Tanks Container Storage Unit West Consolidation of Solids & Sludges Unit Bulk Solids Storage Unit Railcar Loading & Unloading Unit Loading & Unloading Rack for Bulk Liquids other than Acids (pH ≥ 4 only) Bulk Acid Loading & Unloading Rack (pH ≤ 10 only) Off-site Treatment and/or Disposal </p> <p> Acids from M-1 can go to the: M-2 Treatment Unit M-11 Treatment Unit Acid Bulk Receiving & Storage Tanks Container Storage Unit West Bulk Acid Loading & Unloading Rack (pH ≤ 10 only) Off-site Treatment and/or Disposal </p> <p> Recovered Oil from M-1 can go to the: Storage & Treatment Tanks Container Storage Unit West Railcar Loading & Unloading Unit Loading & Unloading Rack for Bulk Liquids other than Acids (pH ≥ 4 only) Bulk Acid Loading & Unloading Rack (pH ≤ 10 only) </p>
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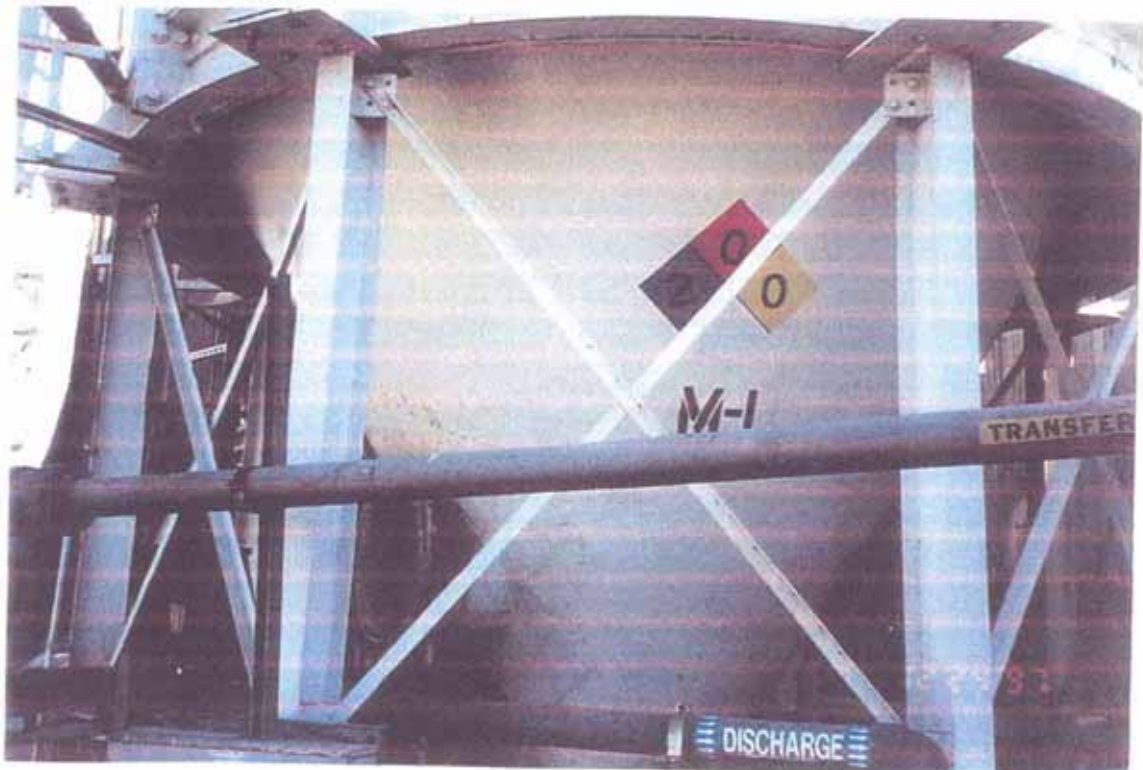
	Off-site Treatment and/or Sales
RCRA AIR EMISSION STANDARDS	M-1 must comply with Article 28, Chapter 14, Division 4.5, Title 22 Cal Code Regs 66264 Subpart CC.
WASTE TYPE	<p>Pumpable aqueous liquids, solutions, slurries, and sludges-corrosives and wastes with metals, salts, and reactive anions-sulfide, cyanide, etc. (no D003), including: Waste corrosives from industrial activities. Metal bearing wastes from the metal plating, metal finishing, and electronics industries. Scale and rust removal wastes from boilers, heat exchangers, radiator shops, and various industrial activities, storm water and groundwater contaminated with metals, salts, corrosives, and/or reactive anions –sulfide, cyanide, etc. (no D003).</p> <p>Wastes from equipment cleaning and maintenance activities including tank and container cleaning, that result in wastes with corrosives, metals, salts, and/or reactive anions-sulfide, cyanide, etc. (no D003).</p> <p>Waste chemicals (aged, surplus, or off-specification), which contain corrosives, metals, salts, and/or reactive anions-sulfide, cyanide, etc. (no D003). Alum, gypsum, lime, phosphate, and similar sludges. Photochemical and photo processing wastes.</p> <p>Wastes from pollution control devices. Spill clean-ups. Other similar wastes.</p> <p>Oil and water emulsions-typically mixtures of oil, water, soaps (alkaline salts of organic acids), caustics, and surfactants, and, in some cases, containing corrosives and/or metals, including: Wastes from industrial equipment cleaning and maintenance activities using soaps and/or caustics. Water based and water soluble metal cutting and machining lubricating and cooling oils. Used Oils.</p> <p>Oils contaminated with corrosives. Waste chemicals (aged, surplus, or off-specification), which contain emulsified oil, soaps, surfactants, and/or caustics. Other emulsified industrial aqueous wastes. Other similar wastes.</p>
RCRA AND NON-	The tanks in this unit may only be used to store or treat the

RCRA HAZARDOUS WASTE CODES	<p>types of wastes listed above that are identified by any of the following RCRA and non-RCRA waste codes:</p> <p style="text-align: center;">RCRA:</p> <p>D002, D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D020, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D031, D032, D033, D034, D035, D036, D037, D038, D039, D040, D041, D042, D043</p> <p>F006, F007, F008, F009, F010, F011, F012</p> <p>K002, K003, K004, K005, K006, K007, K008, K048, K049, K050, K051, K052, K061, K062, K069, K071, K084, K086, K088, K106</p> <p>P010, P011, P012, P013, P021, P029, P030, P063, P074, P076, P078, P098, P099, P104, P106, P113, P114, P115, P119, P120, P121</p> <p>U032, U134, U135, U144, U145, U146, U151, U204, U205, U214, U215, U216, U217</p> <p style="text-align: center;">NON-RCRA:</p> <p>121, 122, 123, 131, 132, 133, 134, 135, 141, 162, 171, 172, 181, 221, 222, 223, 241, 291, 311, 331, 341, 342, 343, 411, 421, 431, 441, 451, 491, 521, 541, 551, 561, 581, 612, 711, 721, 722, 723, 724, 725, 726, 727, 728, 791, 792</p>
UNIT SPECIFIC SPECIAL CONDITIONS	None

M-1 Treatment Unit



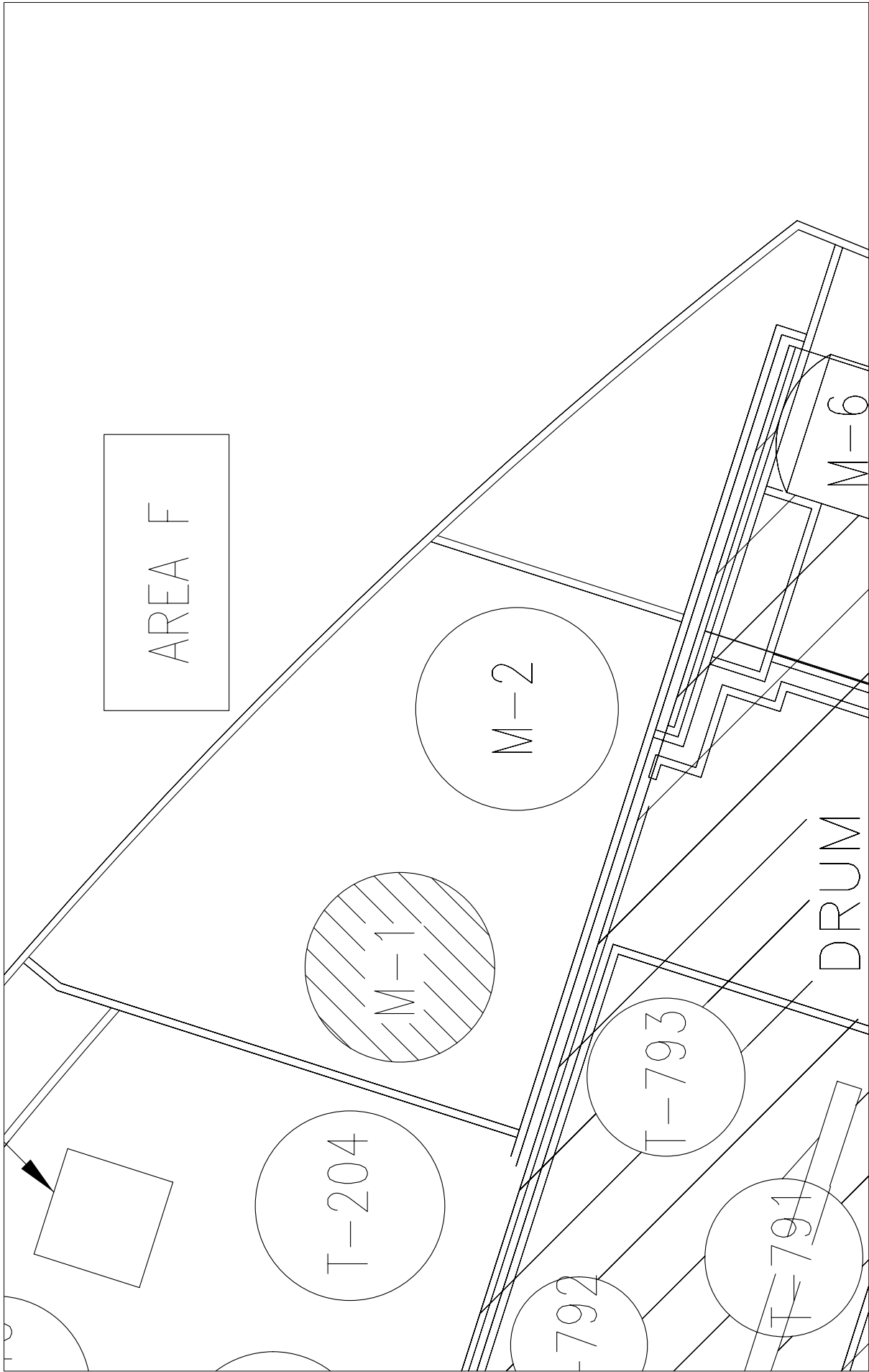
Two views of the bottom of M-1.



M-1 Treatment Unit



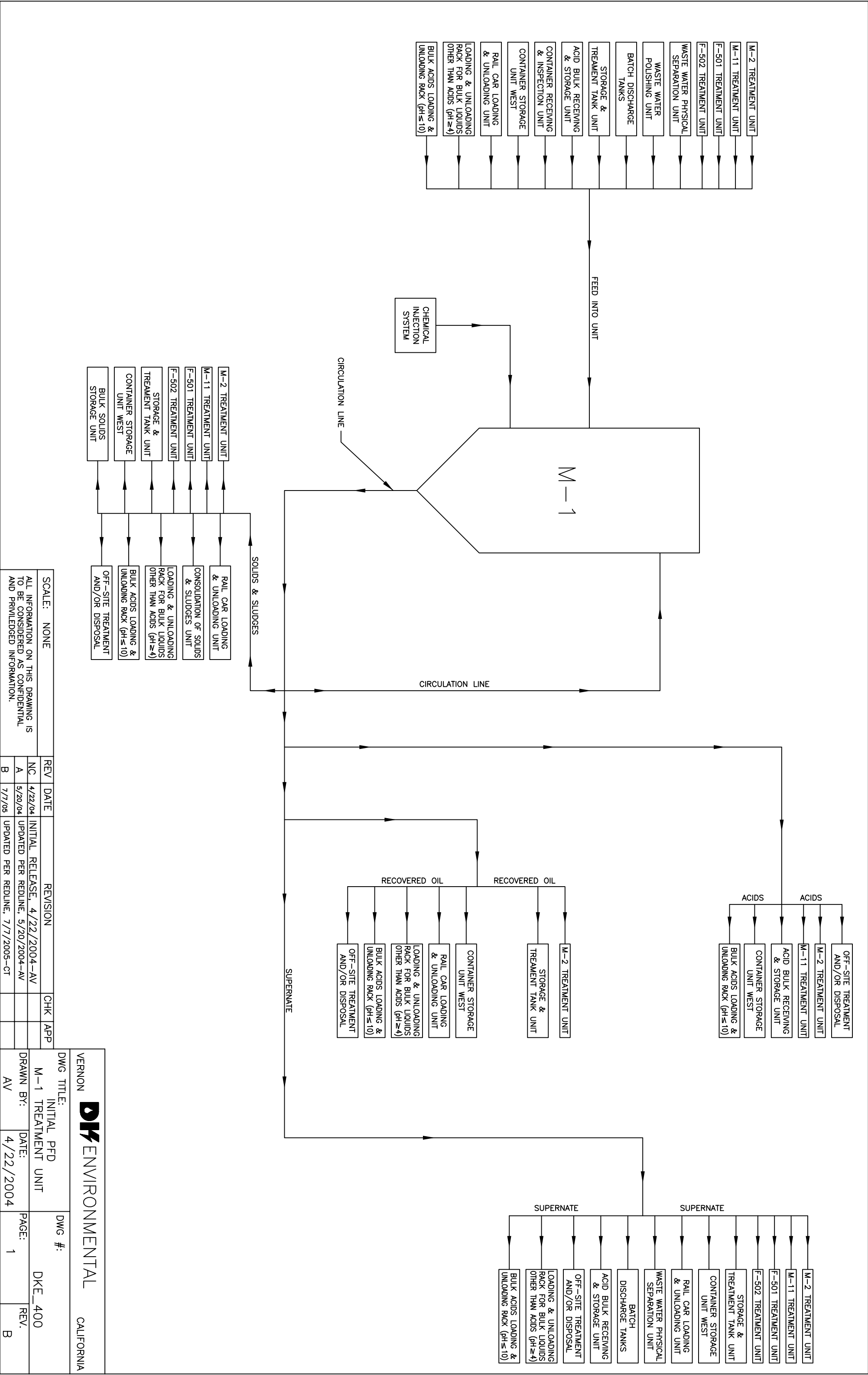
M-1 will be relocated on a new seismic foundation.



REV	DATE	REVISION	CHK	APP
NC	4/24/2004	INITIAL RELEASE, KS 4/24/04-AV		

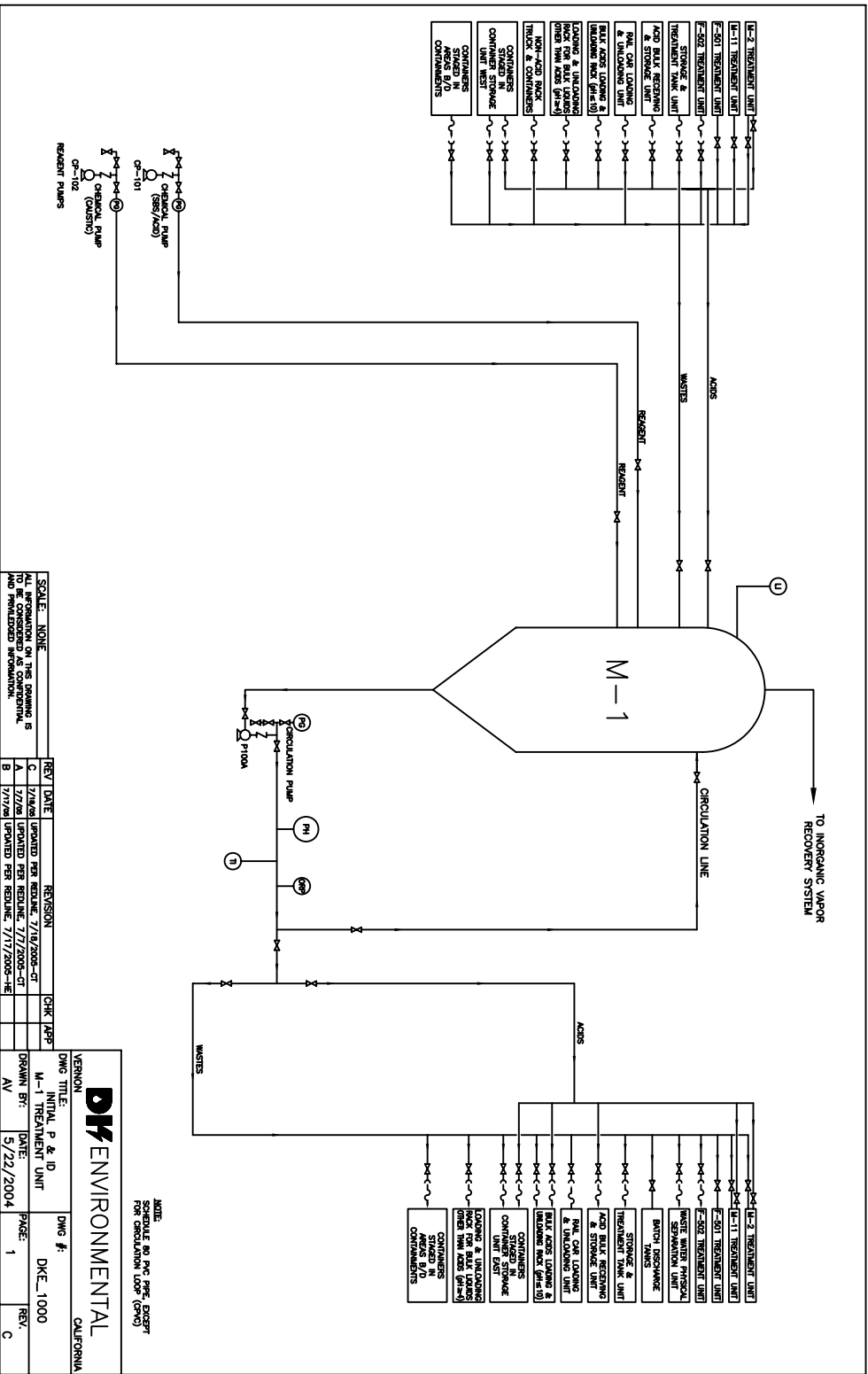
DE ENVIROMENTAL		CALIFORNIA
DWG TITLE: M-1	DWG #:	
TREATMENT UNIT	IV-1 (INITIAL)	
DRAWN BY: AV	DATE: 4/24/2004	PAGE: 1 OF 1
		REV. NC

SCALE: NONE



SCALE: NONE		REVISION		CHK	APP
REV	DATE	INITIAL RELEASE, 4/22/2004-AV			
NC	4/22/04				
A	5/20/04	UPDATED PER REDLINE, 5/20/2004-AV			
B	7/7/05	UPDATED PER REDLINE, 7/7/2005-CT			

VERNON		DKE ENVIRONMENTAL		CALIFORNIA	
DWG TITLE:		INITIAL PFD		DWG #:	
M-1 TREATMENT UNIT				DKE_400	
DRAWN BY:		DATE:		PAGE:	
AV		4/22/2004		1	
				REV.	
				B	



SCALE: NONE		REV DATE		REVISION		CHK APP		VERSION		DWG TITLE:		DWG #:	
ALL INFORMATION ON THIS DRAWING IS TO BE CONSIDERED AS CONFIDENTIAL AND PROPRIETARY INFORMATION.		A		12/1/2005		12/1/2005		M-1 TREATMENT UNIT		INITIAL P & ID		DKE_1000	
		B		7/17/2004		7/17/2004		M-1 TREATMENT UNIT		DATE:		PAGE: 1	
										5/22/2004		REV. C	

ENVIRONMENTAL
CALIFORNIA

UNIT NAME	M-2 Treatment Unit
LOCATION	Within Area F, at the northwest corner of the facility. The location of this equipment and the boundary of this waste management unit are shown in Figure IV-2 (Initial).
ACTIVITY TYPE	Storage and Treatment in tanks (primarily consolidation of wastes, acidification, phase separation, and neutralization of any recovered oil phase).
ACTIVITY DESCRIPTION	<p>The M-2 treatment unit is a batch treatment system that allows separation of oil and water emulsions. The resultant treated aqueous phase may be discharged to the LACSD after further treatment in other on-site units (when required) and testing and approval in the Batch Discharge Tanks. M-2 is also used to consolidate and store wastes, including waste acids, prior to or after storage or treatment in other on site treatment units, or shipment off site.</p> <p>When M-2 is treating a batch to separate soluble oils from emulsions, the treatment regimen includes addition of acid to reduce the pH, and/or the addition of other de-emulsifying reagents. M-2 is then allowed to stand so that the oil layer can separate by gravity. After gravity separation, the aqueous layer may be decanted to other on-site treatment units. The remaining oil layer can be neutralized with caustic in M-2, transferred to other on-site units, or shipment off site.</p>
PHYSICAL DESCRIPTION	The M-2 system consists of the following equipment: Tank M-2 and ancillary equipment. Tank M-2 is an above ground, 20,000 gallon, FRP, flat bottom tank.
MAXIMUM CAPACITY	20,000 gallons S02/T01 (storage & treatment in tanks).
WASTES COME FROM	Wastes come to this unit from: M-1 Treatment Unit M-11 Treatment Unit F-501 Treatment Unit F-502 Treatment Unit Wastewater Physical Separation Unit Wastewater Polishing Unit Batch Discharge Tanks Storage & Treatment Tanks Acid Bulk Receiving & Storage Tanks Container Receiving & Inspection Unit

	Container Storage Unit West Railcar Loading & Unloading Unit Loading & Unloading Rack for Bulk Liquids other than Acids (pH ≥ 4 only) Bulk Acid Loading & Unloading Rack (pH ≤ 10 only) Off-site Generators
WASTE GOES TO:	<p>Waste Oil from M-2 can go to the:</p> M-1 Treatment Unit M-11 Treatment Unit F-501 Treatment Unit F-502 Treatment Unit Storage & Treatment Tanks Container Storage Unit West Railcar Loading & Unloading Unit Loading & Unloading Rack for Bulk Liquids other than Acids (pH ≥ 4 only) Bulk Acid Loading & Unloading Rack (pH ≤ 10 only) Off-site Treatment and/or Disposal
	<p>Supernate from M-2 can go to the:</p> M-1 Treatment Unit M-11 Treatment Unit F-501 Treatment Unit F-502 Treatment Unit Wastewater Physical Separation Unit Wastewater Polishing Unit Batch Discharge Tanks Storage & Treatment Tanks Acid Bulk Receiving & Storage Tanks Container Storage Unit West Railcar Loading & Unloading Unit Loading & Unloading Rack for Bulk Liquids other than Acids (pH ≥ 4 only) Bulk Acid Loading & Unloading Rack (pH ≤ 10 only) Off-site Treatment and/or Disposal
	<p>Solids & Sludges from M-2 can go to the:</p> M-1 Treatment Unit M-11 Treatment Unit F-501 Treatment Unit F-502 Treatment Unit Storage & Treatment Tanks Container Storage Unit West Consolidation of Solids & Sludges Unit

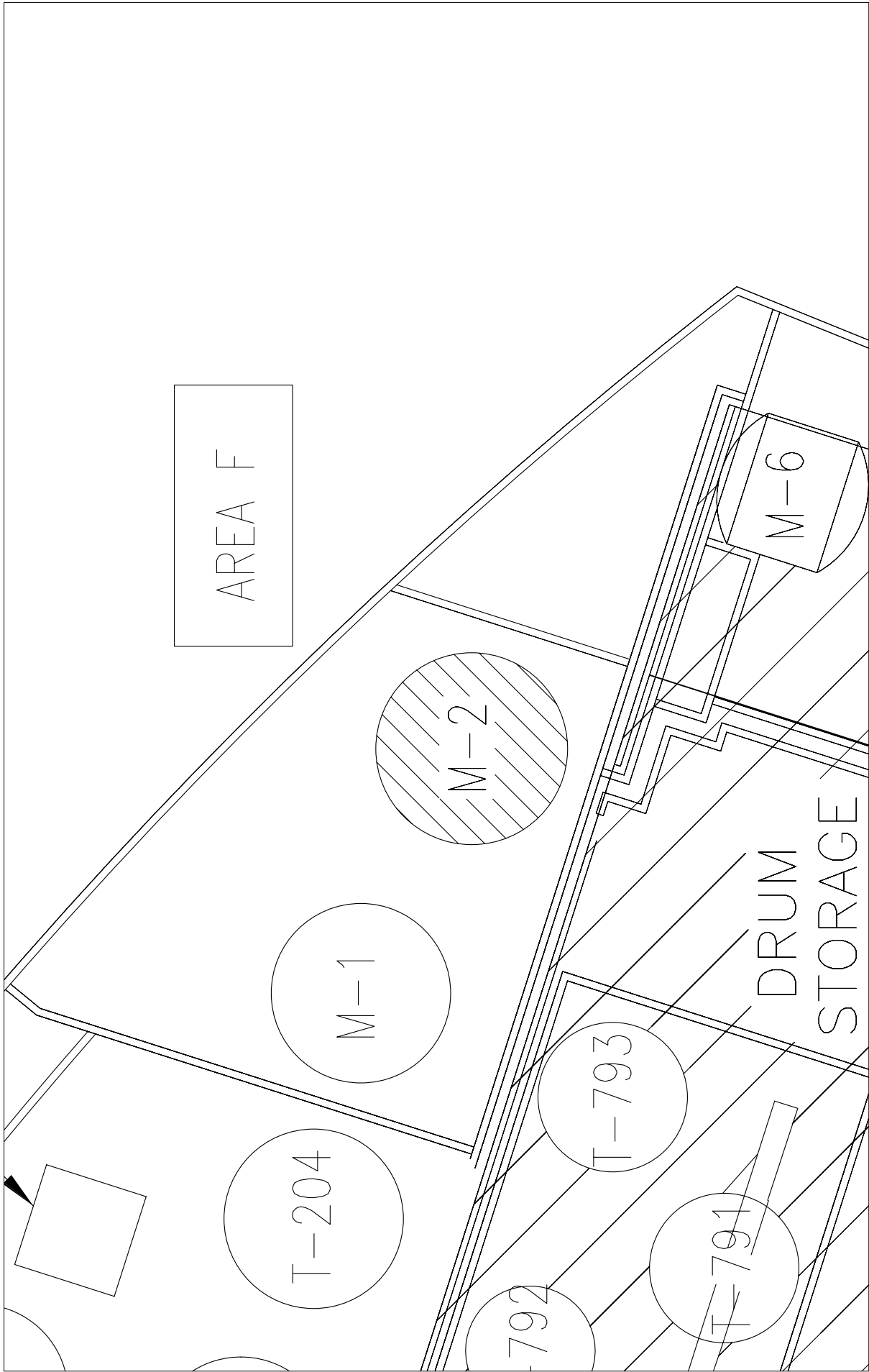
	<p>Bulk Solids Storage Unit Railcar Loading & Unloading Unit Loading & Unloading Rack for Bulk Liquids other than Acids (pH \geq 4 only) Bulk Acid Loading & Unloading Rack (pH \leq 10 only) Off-site Treatment and/or Disposal</p> <p>Acids from M-2 can go to the: M-1 Treatment Unit M-11 Treatment Unit Acid Bulk Receiving & Storage Tanks Container Storage Unit West Bulk Acid Loading & Unloading Rack (pH \leq 10 only) Off-site Treatment and/or Disposal</p> <p>Recovered Oil from M-2 can go to the: Storage & Treatment Tanks Container Storage Unit West Railcar Loading & Unloading Unit Loading & Unloading Rack for Bulk Liquids other than Acids (pH \geq 4 only) Bulk Acid Loading & Unloading Rack (pH \leq 10 only) Off-site Treatment and/or Sales</p>
RCRA AIR EMISSION STANDARDS	M-2 must comply with Article 28, Chapter 14, Division 4.5, Title 22 Cal Code Regs 66264 Subpart CC.
WASTE TYPE	<p>Oil and water emulsions-typically mixtures of oil, water, soaps (alkaline salts of organic acids), caustics, and surfactants, and, in some cases, containing corrosives and/or metals, including: Wastes from industrial equipment cleaning and maintenance activities using soaps and/or caustics. Used Oils.</p> <p>Water based and water soluble metal cutting and machining lubricating and cooling oils. Oils contaminated with corrosives.</p> <p>Waste chemicals (aged, surplus, or off-specification), which contain emulsified oil, soaps, surfactants, and/or caustics. Other emulsified industrial aqueous wastes. Other similar wastes.</p>

	<p>Pumpable aqueous liquids, solutions, slurries, and sludges-corrosives and wastes with metals, salts, and reactive anions-sulfide, cyanide, etc. (no D003), including: Waste corrosives from industrial activities. Metal bearing wastes from the metal plating, metal finishing, and electronics industries. Scale and rust removal wastes from boilers, heat exchangers, radiator shops, and various industrial activities, storm water and groundwater contaminated with metals, salts, corrosives, and/or reactive anions –sulfide, cyanide, etc. (no D003).</p> <p>Wastes from equipment cleaning and maintenance activities including tank and container cleaning, that result in wastes with corrosives, metals, salts, and/or reactive anions-sulfide, cyanide, etc. (no D003). Waste chemicals (aged, surplus, or off-specification), which contain corrosives, metals, salts, and/or reactive anions-sulfide, cyanide, etc. (no D003).</p> <p>Alum, gypsum, lime, phosphate, and similar sludges. Photochemical and photo processing wastes.</p> <p>Wastes from pollution control devices. Spill clean-ups. Other similar wastes.</p>
RCRA AND NON-RCRA HAZARDOUS WASTE CODES	<p>The tanks in this unit may only be used to store or treat the types of wastes listed above that are identified by any of the following RCRA and non-RCRA waste codes:</p> <p style="text-align: center;">RCRA:</p> <p>D002, D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D020, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D031, D032, D033, D034, D035, D036, D037, D038, D039, D040, D041, D042, D043</p> <p>F006, F007, F008, F009, F010, F011, F012</p> <p>K002, K003, K004, K005, K006, K007, K008, K048, K049, K050, K051, K052 K061, K062, K069, K071, K084, K086, K088, K106</p> <p>P010, P011, P012, P013, P021, P029, P030, P063, P074, P076, P078, P098, P099, P104, P106, P113, P114, P115, P119, P120, P121</p>

	<p>U032, U134, U135, U144, U145, U146, U151, U204, U205, U214, U215, U216, U217</p> <p>NON-RCRA:</p> <p>121, 122, 123, 131, 132, 133, 134, 135, 141, 171, 181, 221, 222, 223, 241, 291, 311, 331, 341, 342, 343, 541, 551, 561, 581, 612, 721, 722, 723, 724, 725, 726, 727, 728, 741, 791, 792</p>
UNIT SPECIFIC SPECIAL CONDITIONS	None

M-2 Treatment Unit

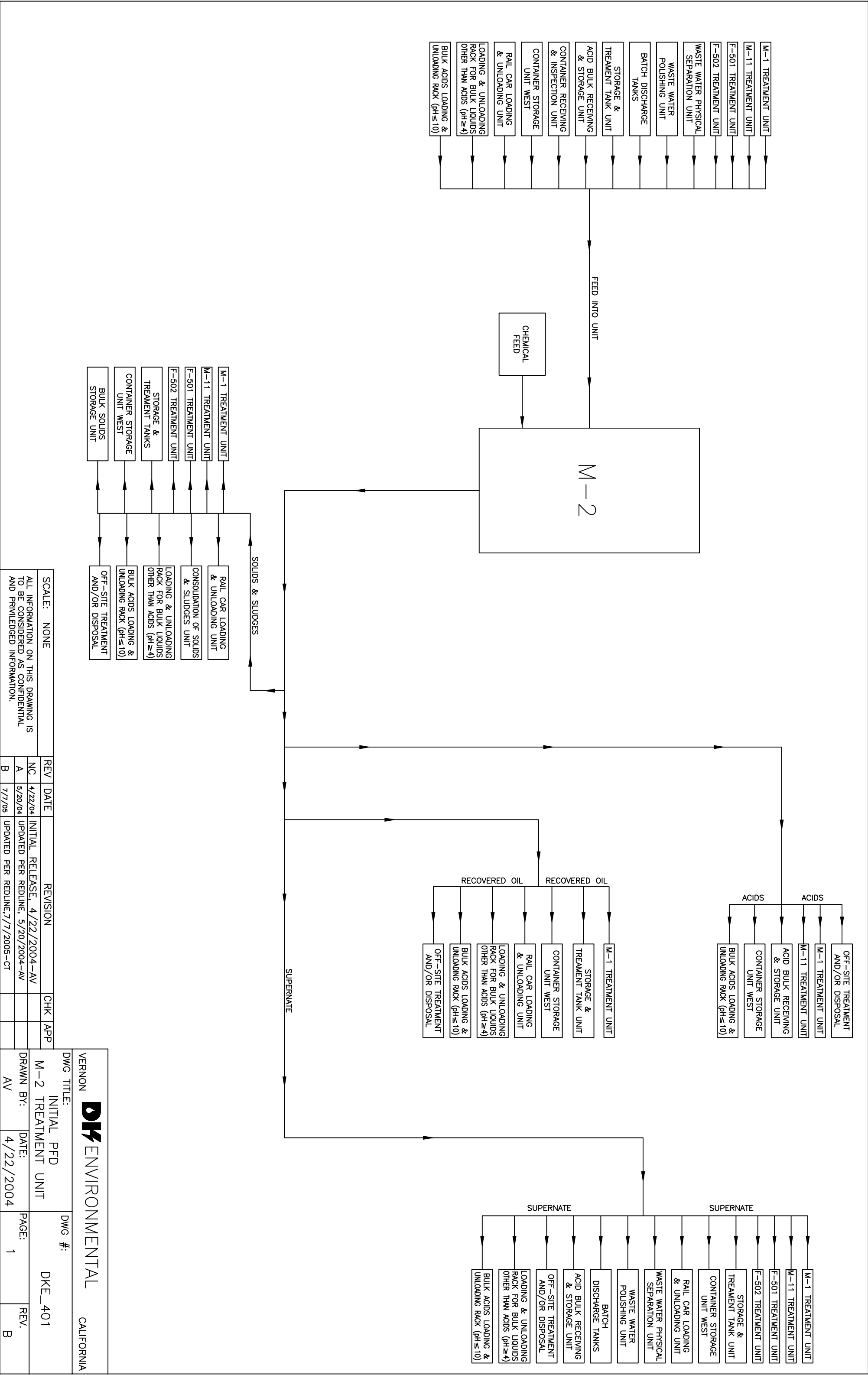




REV	DATE	REVISION	CHK	APP
NC	4/24/2004	INITIAL RELEASE, KS 4/24/04-AV		

DE ENVIROMENTAL		CALIFORNIA	
VERNON		DWG TITLE: M-2	DWG #: IV-2 (INITIAL)
TREATMENT UNIT		DATE: 4/24/2004	PAGE: 1 OF 1
DRAWN BY: AV		REV:	NC

SCALE: NONE



SCALE: NONE		REVISION		CHK	APP
REV	DATE				
NC	4/22/04	INITIAL RELEASE, 4/22/2004-AV			
A	5/20/04	UPDATED PER REDLINE, 5/20/2004-AV			
B	7/7/05	UPDATED PER REDLINE, 7/7/2005-CT			

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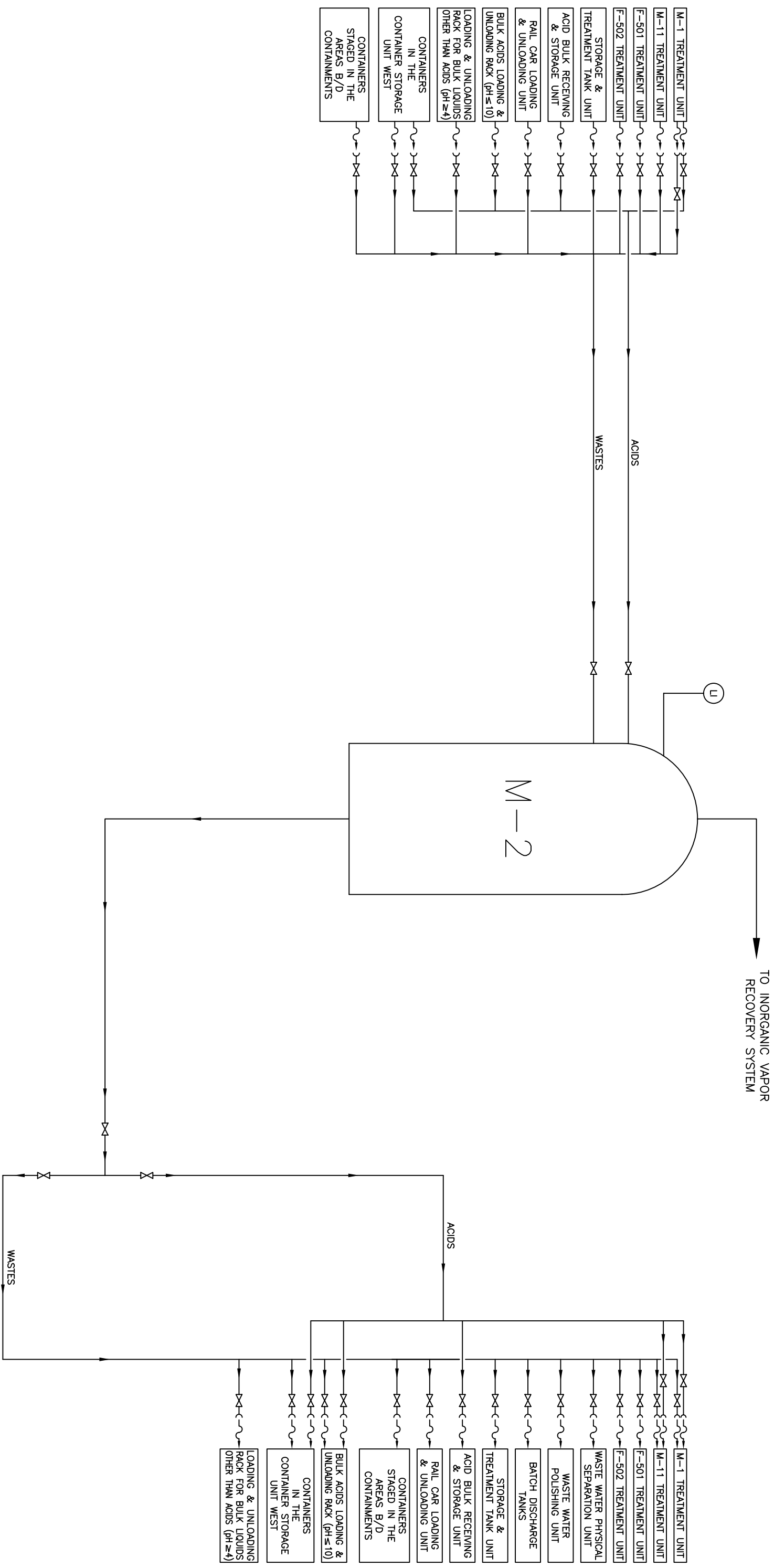
DWG TITLE:

INITIAL PFD
M-2 TREATMENT UNIT


DWG #:

DKE_401

DRAWN BY:	DATE:	PAGE:	REV.
AV	4/22/2004	1	B



NOTE:
ALL PIPING IS
SCHEDULE 80 PVC

<div style="text-align: center;"> DHE ENVIRONMENTAL CALIFORNIA</div>					
VERNON					
DWG TITLE: INITIAL P & ID M-2 TREATMENT UNIT			DWG #: DKE_1001		
DRAWN BY: AV		DATE: 5/22/2004	PAGE: 1	REV. B	
SCALE: NONE		REV	DATE	REVISION	CHK APP
ALL INFORMATION ON THIS DRAWING IS TO BE CONSIDERED AS CONFIDENTIAL AND PRIVILEGED INFORMATION.		NC	5/22/04	INITIAL RELEASE, 5/22/2004-AV	
		A	7/7/05	UPDATED PER REDLINE, 7/7/2005-CT	
		B	7/17/05	UPDATED PER REDLINE, 7/17/2005-HE	

UNIT NAME	M-11 Treatment Unit
LOCATION	Within Area D. The location of this equipment and the boundary of this waste management unit are shown in Figure IV-3 (Initial).
ACTIVITY TYPE	Storage and Treatment in tanks (consolidation of wastes, neutralization of corrosives, precipitation of metals, chemical oxidation of organics and low levels of sulfides and cyanides, phase separation, and hexavalent chrome reduction.
ACTIVITY DESCRIPTION	<p>The M-11 treatment unit is a batch treatment system that primarily is used to treat aqueous corrosive and metal bearing wastes. The resultant treated aqueous phase may be discharged to the LACSD after further treatment in other on-site units (when required) and testing and approval in the Batch Discharge Tanks. Tank M-11 is also used to consolidate and store wastes prior to and/or after storage or treatment in other on site treatment units, or shipment off site.</p> <p>The treatment regimen in tank M-11 includes reduction of hexavalent chrome, oxidation of organics and low levels of sulfides and cyanides, neutralization, and precipitation. After neutralization, the primary product is a slurry of water and precipitated solids. After neutralization, the entire batch may be transferred to other on-site treatment units, or solids may be allowed to gravity settle in M-11, with the separated supernate and settled solids phases then transferred to other on-site treatment units. Often there will be a separated floating oil phase, which may be emulsified. The oil phase is transferred to other on-site treatment units, or shipped off site.</p>
PHYSICAL DESCRIPTION	The M-11 system consists of the following equipment: Tank M-11 and ancillary equipment. Tank M-11 is a 17,756-gallon, above ground, FRP, cone bottom tank.
MAXIMUM CAPACITY	Tank M-11 has a maximum storage capacity of 17,756 gallons. The throughput capacity is determined by the actual waste being treated and is not a fixed value.

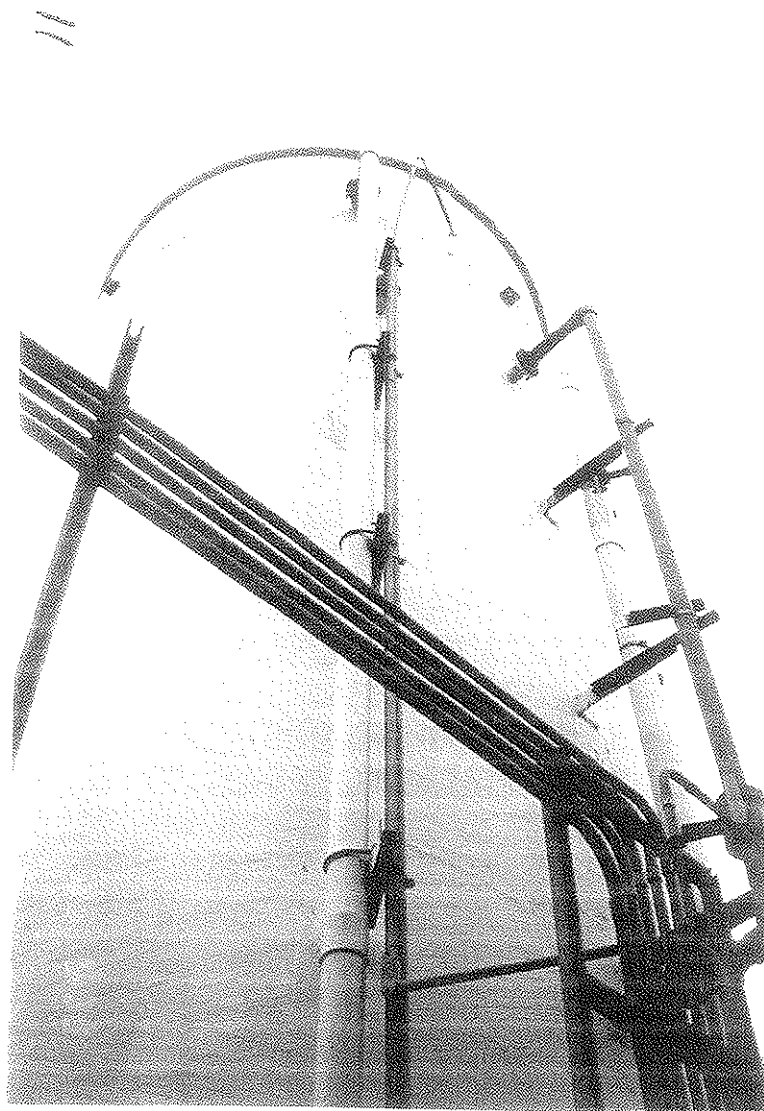
WASTES COME FROM	<p>Wastes come to this unit from:</p> <ul style="list-style-type: none"> M-1 Treatment Unit M-2 Treatment Unit F-501 Treatment Unit F-502 Treatment Unit Wastewater Polishing Unit Batch Discharge Tanks Storage & Treatment Tanks Acid Bulk Receiving & Storage Tanks Container Receiving & Inspection Unit Container Storage Unit West Railcar Loading & Unloading Unit Loading & Unloading Rack for Bulk Liquids other than Acids (pH \geq 4 only) Bulk Acid Loading & Unloading Rack (pH \leq 10 only) Off-site Generators
WASTE GO TO	<p>Waste Oil from M-11 can go to the:</p> <ul style="list-style-type: none"> M-1 Treatment Unit M-2 Treatment Unit F-501 Treatment Unit F-502 Treatment Unit Storage & Treatment Tanks Container Storage Unit West Railcar Loading & Unloading Unit Loading & Unloading Rack for Bulk Liquids other than Acids (pH \geq 4 only) Bulk Acid Loading & Unloading Rack (pH \leq 10 only) Off-site Treatment and/or Disposal <p>Supernate from M-11 can go to the:</p> <ul style="list-style-type: none"> M-1 Treatment Unit M-2 Treatment Unit F-501 Treatment Unit F-502 Treatment Unit Wastewater Physical Separation Unit Wastewater Polishing Unit Batch Discharge Tanks Storage & Treatment Tanks Container Storage Unit West Railcar Loading & Unloading Unit Loading & Unloading Rack for Bulk Liquids other than Acids (pH \geq 4 only)

	<p>Bulk Acid Loading & Unloading Rack (pH ≤ 10 only) Off-site Treatment and/or Disposal</p> <p>Solids & Sludges from M-11 can go to the: M-1 Treatment Unit M-2 Treatment Unit F-501 Treatment Unit F-502 Treatment Unit Storage & Treatment Tanks Container Storage Unit West Consolidation of Solids & Sludges Unit Bulk Solids Storage Unit Railcar Loading & Unloading Unit Loading & Unloading Rack for Bulk Liquids other than Acids (pH ≥ 4 only) Bulk Acid Loading & Unloading Rack (pH ≤ 10 only) Off-site Treatment and/or Disposal</p> <p>Acids (pH ≥ 4) from M-11 can go to the: M-1 Treatment Unit M-2 Treatment Unit Acid Bulk Receiving & Storage Tanks Container Storage Unit West Loading & Unloading Rack for Bulk Liquids other than Acids (pH ≥ 4 only) Bulk Acid Loading & Unloading Rack (pH ≤ 10 only) Off-site Treatment and/or Disposal</p> <p>Recovered Oil from M-11 can go to the: Storage & Treatment Tanks Container Storage Unit West Railcar Loading & Unloading Unit Loading & Unloading Rack for Bulk Liquids other than Acids (pH ≥ 4 only) Bulk Acid Loading & Unloading Rack (pH ≤ 10 only) Off-site Treatment and/or Sales</p>
RCRA AIR EMISSION STANDARDS	M-11 must comply with Article 28, Chapter 14, Division 4.5, Title 22 Cal Code Regs 66264 Subpart CC.
WASTE TYPE	Pumpable aqueous liquids, solutions, slurries, and sludges-corrosives and wastes with metals, salts, and reactive anions-sulfide, cyanide, etc. (no D003), including: Waste corrosives from industrial activities. Metal bearing wastes

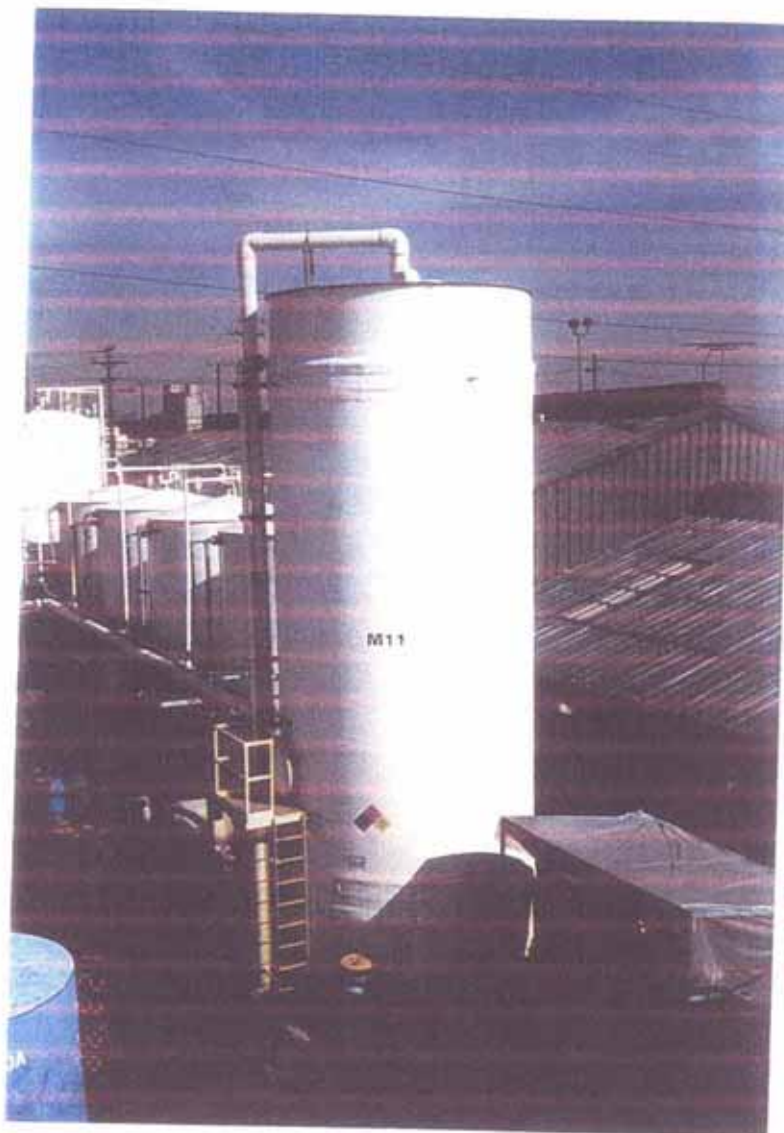
	<p>from the metal plating, metal finishing, and electronics industries. Scale and rust removal wastes from boilers, heat exchangers, radiator shops, and various industrial activities, storm water and groundwater contaminated with metals, salts, corrosives, and/or reactive anions –sulfide, cyanide, etc. (no D003). Wastes from equipment cleaning and maintenance activities including tank and container cleaning, that result in wastes with corrosives, metals, salts, and/or reactive anions-sulfide, cyanide, etc. (no D003).</p> <p>Waste chemicals (aged, surplus, or off-specification) that contain corrosives, metals, salts, and/or reactive anions-sulfide, cyanide, etc. (no D003). Alum, gypsum, lime, phosphate, and similar sludges. Photochemicals and photo processing wastes. Used Oils.</p> <p>Wastes from pollution control devices. Spill clean-ups. Other similar wastes.</p>
RCRA AND NON-RCRA HAZARDOUS WASTE CODES	<p>The tanks in this unit may only be used to store or treat the types of wastes listed above that are identified by any of the following RCRA and non-RCRA waste codes:</p> <p style="text-align: center;">RCRA:</p> <p>D002, D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D020, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D031, D032, D033, D034, D035, D036, D037, D038, D039, D040, D041, D042, D043</p> <p>F006, F007, F008, F009, F010, F011, F012</p> <p>K002, K003, K004, K005, K006, K007, K008, K061, K062, K069, K071, K084, K086, K088, K106</p> <p>P010, P011, P012, P013, P021, P029, P030, P063, P074, P076, P078, P098, P099, P104, P106, P113, P114, P115, P119, P120, P121</p> <p>U032, U134, U135, U144, U145, U146, U151, U204, U205, U214, U215, U216, U217</p>

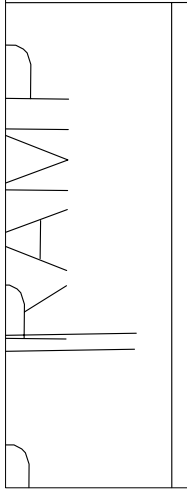
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UNIT SPECIFIC SPECIAL CONDITIONS	None

M-11 Treatment Unit

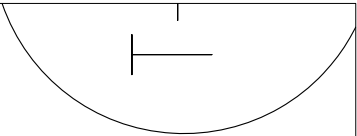
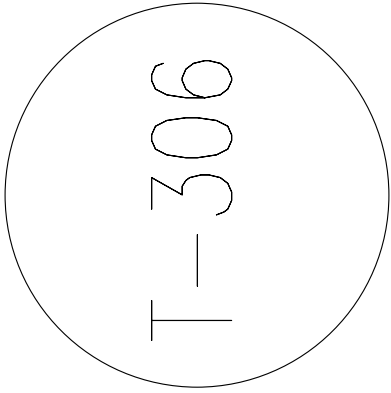
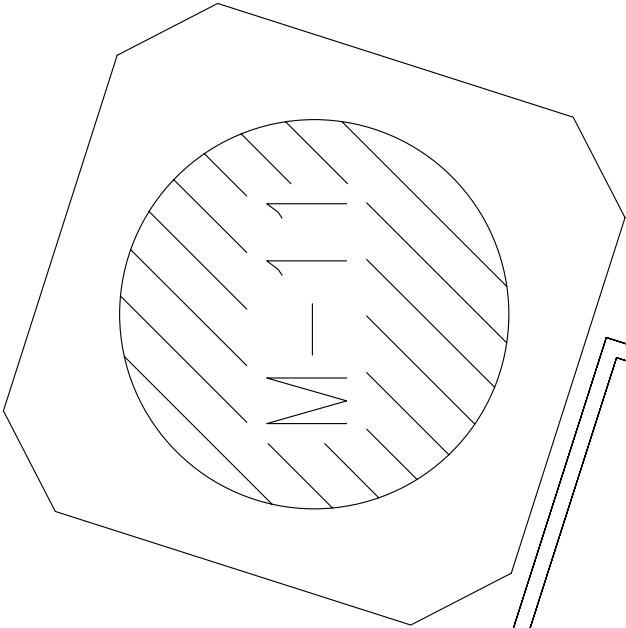


M-11 Treatment Unit






AREA D



REV	DATE	REVISION	CHK	APP
NC	4/24/2004	INITIAL RELEASE, KS 4/24/04-AV		



ENVIROMENTAL

CALIFORNIA

DWG TITLE: M-11

TREATMENT UNIT

DWG #:

IV-3 (INITIAL)

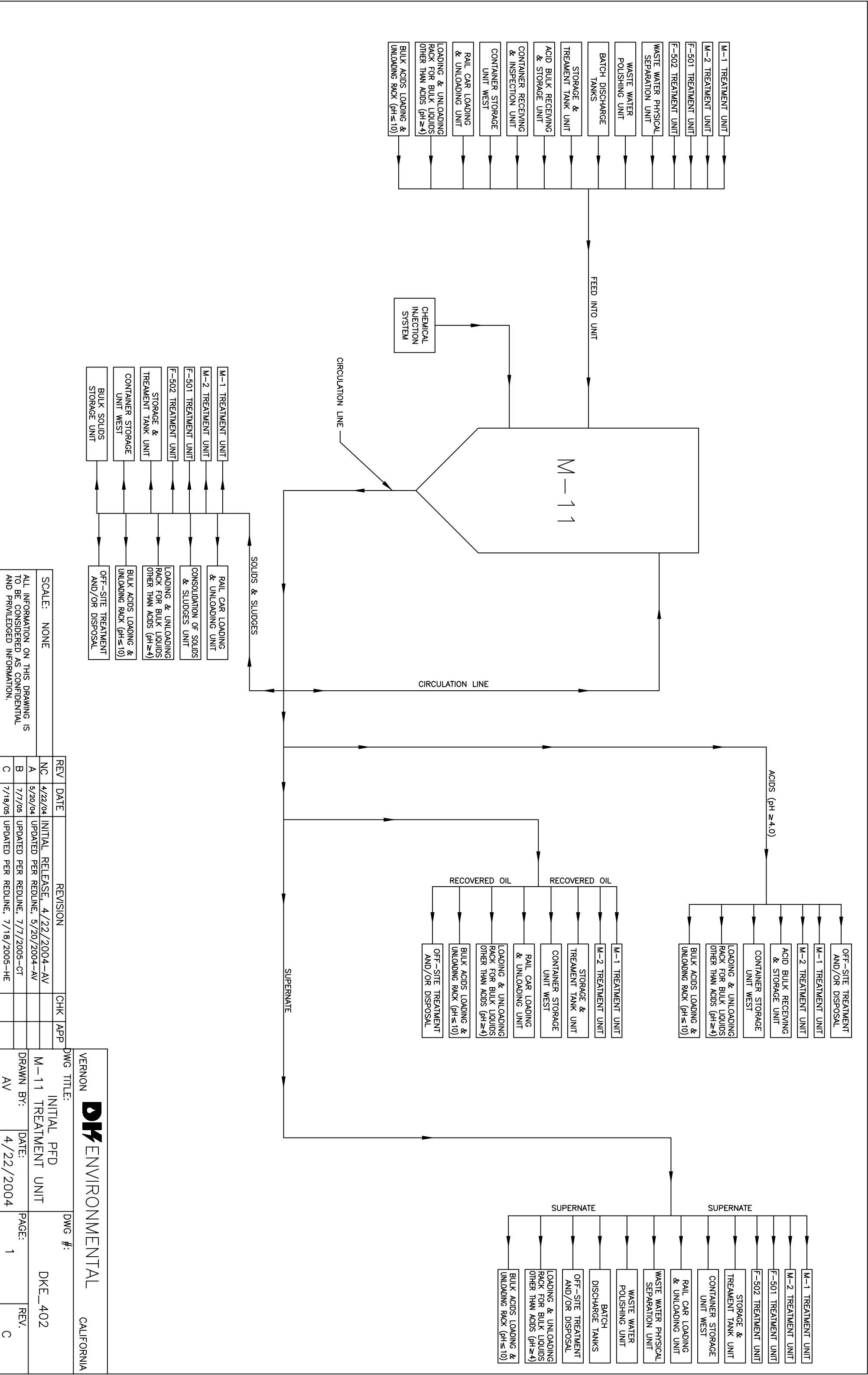
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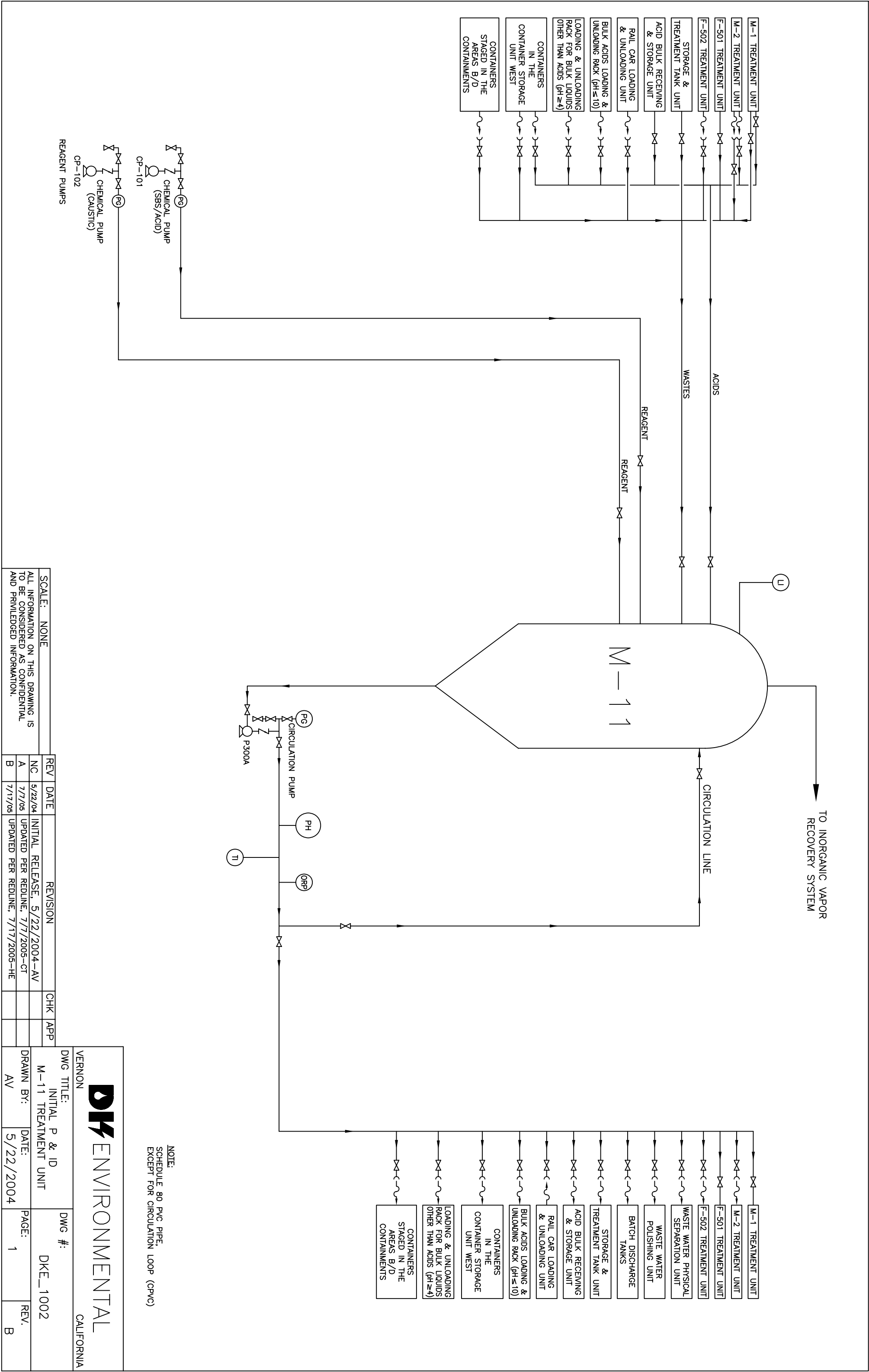
DATE: 4/24/2004

PAGE: 1 OF 1

REV. NC

SCALE: NONE





UNIT NAME	F-501 Treatment Unit
LOCATION	Within Area D. The location of this equipment and the boundary of this waste management unit are shown in Figure IV-6 (Initial).
ACTIVITY TYPE	T04, Other Treatment (filtration).
ACTIVITY DESCRIPTION	<p>The F-501 treatment unit is a batch treatment system that is used to remove solids from waste slurries prior to further storage or treatment in other on-site units, or shipment off-site. The resultant treated aqueous phase may be discharged to the LACSD after further treatment in other on-site units (when required) and testing and approval in the Batch Discharge Tanks. The primary treatment process employed is filtration.</p> <p>The products of F-501 treatment are a filter cake and filtered liquid.</p> <p>Filter aids such as diatomaceous earth, or similar may be used to precoat the filter cloths and/or as body feed by mixing into the waste slurry prior to waste filtration, to enhance filtration by improving the quality of the filtrate and reducing the liquid content of the filter cake.</p> <p>A batch is started by sealing the filter press. An aqueous slurry of filter aid such as diatomaceous earth, or similar may then be pumped into F-501 to precoat the filter cloths. Next waste slurry is pumped into F-501. Pumping of the waste slurry continues until a rapid rise in inlet pressure or a significant drop in filtration rate indicates that the filter press is full of filter cake. At this point, waste feed is stopped by closing the waste feed valve. Compressed air may then be fed into F-501 to minimize the liquid content of the filter cake.</p> <p>F-501 is opened at the end of each batch and the filter cake is emptied into portable containers or hoppers.</p>
PHYSICAL DESCRIPTION	The F-501 system consists of the following equipment Filter press F-501A. Filter Press F-501A is a Hoesch Industries plate and frame filter press with 39 frames. Each frame is

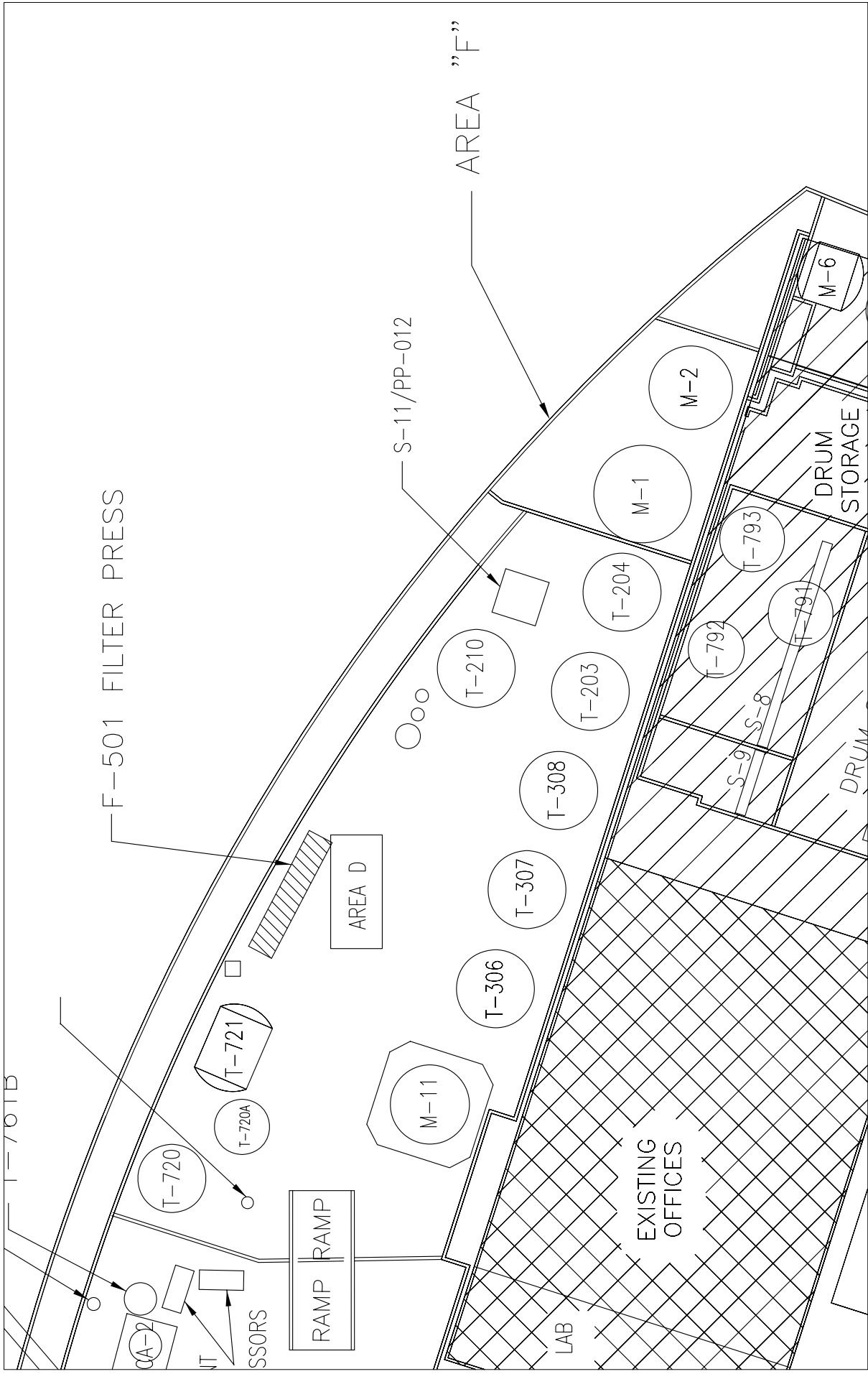
	36" x 36" x 2". The total filter cake capacity is 57 cubic feet.
MAXIMUM CAPACITY	F-501A has a capacity of 57 cubic feet of filter cake per batch.
WASTES COME FROM	Wastes come to this unit from: M-1 Treatment Unit M-2 Treatment Unit M-11 Treatment Unit Wastewater Physical Separation Unit Batch Discharge Tanks Storage & Treatment Tanks Container Receiving & Inspection Unit Container Storage Unit West Loading & Unloading Rack for Bulk Liquids other than Acids (pH \geq 4 only) Off-site Generators
WASTE GO TO	Filtrate from F-501 can go to the: M-1 Treatment Unit M-2 Treatment Unit M-11 Treatment Unit Wastewater Physical Separation Unit Wastewater Polishing Unit Batch Discharge Tanks Storage & Treatment Tanks Container Storage Unit West Railcar Loading & Unloading Unit Loading & Unloading Rack for Bulk Liquids other than Acids (pH \geq 4 only) Off-site Treatment and/or Disposal Filtercake from F-501 can go to the: Container Storage Unit West Consolidation of Solids & Sludges Unit Bulk Solids Storage Unit Railcar Loading & Unloading Unit Off-site Treatment and/or Disposal
RCRA AIR EMISSION STANDARDS	Must comply with Article 28, Chapter 14, Division 4.5, Title 22 Cal Code Regs 66264 Subpart CC.
WASTE TYPE	Pumpable wastes with solids. These wastes include metal and salt bearing wastes from the metal plating, finishing, and electronics industries; wastes from equipment cleaning and de-scaling activities, including tanks, containers, heat

	<p>exchangers, vessels, etc.; from various maintenance and industrial activities; wastes from contaminated storm water, groundwater, spill clean-ups, remediation, and pollution control devices; alum, gypsum, lime and phosphate sludges; photochemical and photo processing wastes; waste chemicals (aged, surplus, or off-specification) which contain solids, and other similar wastes from other similar sources.</p> <p>Oily wastes with solids, used oil, waste oil and water mixtures, fuel and water mixtures, and waste glycols from vehicles, tanks, sumps, bilges, and other equipment cleaning; various maintenance, industrial, and remediation activities, and other similar wastes from other similar sources.</p>
RCRA AND NON-RCRA HAZARDOUS WASTE CODES	<p>This unit may only be used to store or treat the types of wastes listed above that are identified by any of the following RCRA and non-RCRA waste codes:</p> <p style="text-align: center;">RCRA:</p> <p>D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D020, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D031, D032, D033, D034, D035, D036, D037, D038, D039, D040, D041, D042, D043</p> <p>F006, F007, F008, F009, F010, F011, F012</p> <p>K002, K003, K004, K005, K006, K007, K008, K048, K049, K050, K051, K052, K061, K062, K069, K071, K084, K086, K088, K106</p> <p>P010, P011, P012, P013, P021, P029, P030, P063, P074, P076, P078, P098, P099, P104, P106, P113, P114, P115, P119, P120, P121</p> <p>U032, U134, U135, U144, U145, U146, U151, U204, U205, U214, U215, U216, U217</p> <p style="text-align: center;">NON-RCRA:</p> <p>121, 122, 123, 131, 132, 133, 134, 135, 141, 162, 171, 172, 181, 213, 214, 221, 222, 223, 241, 251, 252, 271, 272, 281, 291, 311, 331, 341, 342, 343, 351, 352, 411, 421, 431, 441,</p>

	451, 461, 471, 491, 521, 541, 551, 561, 581, 612, 711, 721, 722, 723, 724, 725, 726, 727, 728, 741, 751
UNIT SPECIFIC SPECIAL CONDITIONS	None

F-501 Treatment Unit

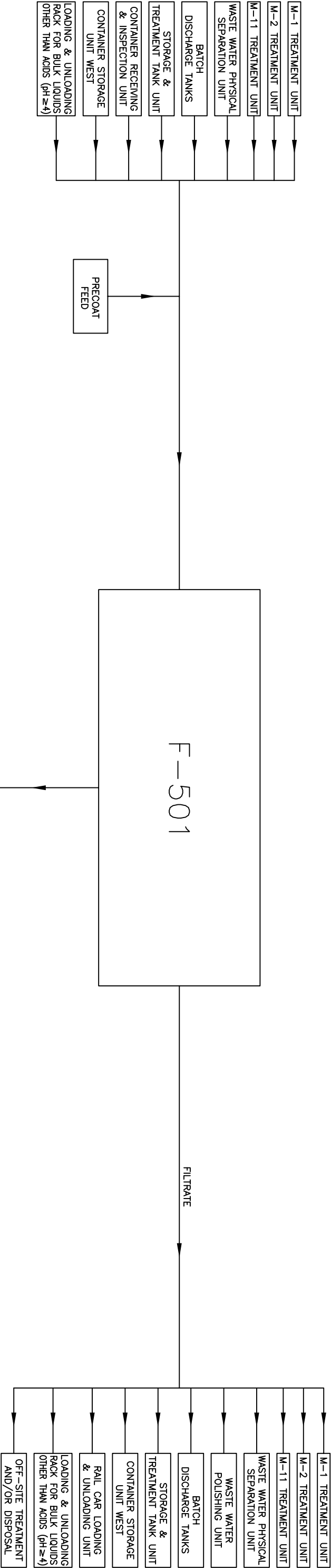




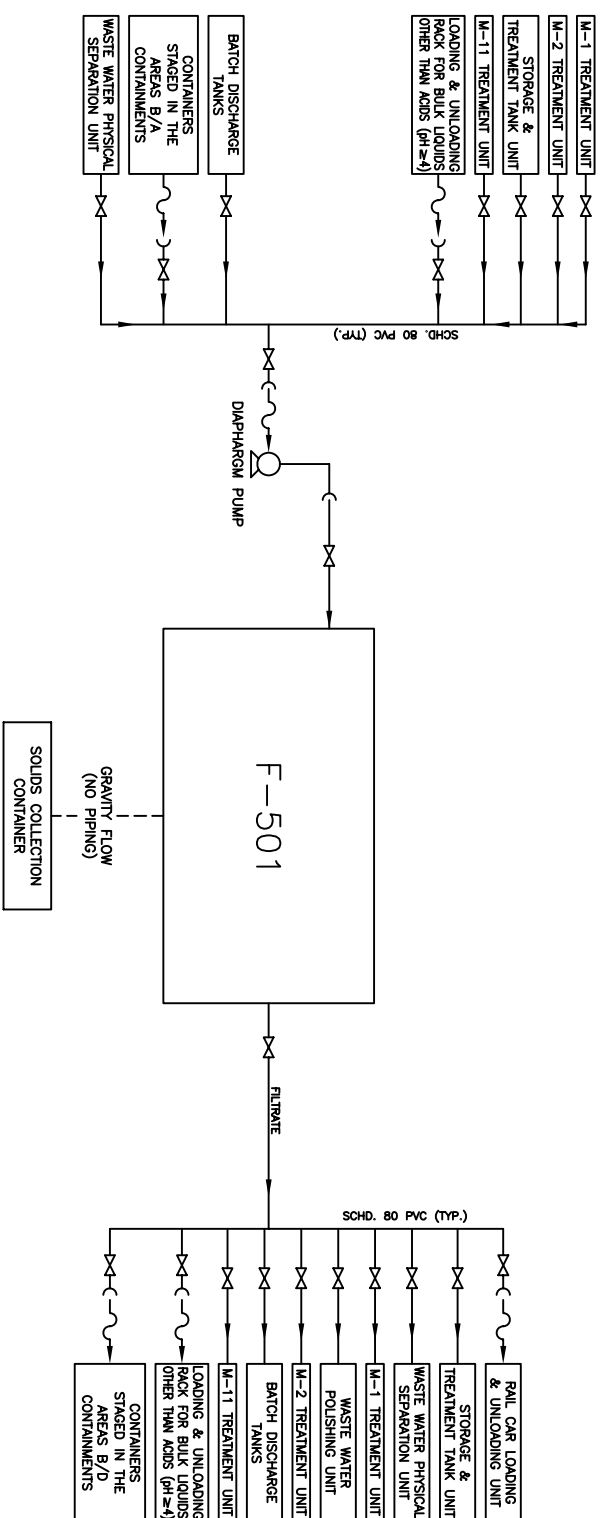
REV	DATE	REVISION	CHK	APP
NC	4/24/2004	INITIAL RELEASE, KS 4/24/04-AV		

ENVIRONMENTAL		VERNON		CALIFORNIA	
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TREATMENT UNIT		DATE:		PAGE:	
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				REV.	
				NC	

SCALE: NONE



VERNON				ENVIRONMENTAL				CALIFORNIA			
DWG TITLE:				DWG #:							
F-501 INITIAL PFD TREATMENT UNIT				DKE_403							
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								REV. B			
SCALE: NONE				ALL INFORMATION ON THIS DRAWING IS TO BE CONSIDERED AS CONFIDENTIAL AND PRIVILEGED INFORMATION.							
REV		DATE		REVISION		CHK		APP			
NC		4/22/04		INITIAL RELEASE, 4/22/2004-AV							
A		5/22/04		UPDATED PER REDLINE, 5/20/2004-AV							
B		7/7/05		UPDATED PER REDLINE, 5/20/2004-AV							



REV. DATE		REVISION		CHK. APP.		VERSION	
A	1/7/2004	INITIAL RELEASE, 5/22/2004-AV				INITIAL, P & ID	DWG #:
B	1/7/2004	UPONED PER REGDING, 7/17/2004-HE				F-501 TREATMENT UNIT	DWG. 1003
SCALE: NONE		ALL INFORMATION ON THIS DRAWING IS TO BE CONSIDERED AS CONFIDENTIAL AND PROPRIETARY INFORMATION.		DRAWN BY: AV		DATE: 5/22/2004	PAGE: 1
							REV. B

ENVIRONMENTAL
CALIFORNIA

UNIT NAME	F-502 Treatment Unit
LOCATION	Within Area A. The location of this equipment and the boundary of this waste management unit are shown in Figure IV-7 (Initial).
ACTIVITY TYPE	T04, Other Treatment (filtration).
ACTIVITY DESCRIPTION	<p>The F-502 treatment unit is a batch treatment system that is used to remove solids from waste slurries prior to further storage or treatment in other on-site units, or shipment off-site. The resultant treated aqueous phase may be discharged to the LACSD after further treatment in other on-site units (when required) and testing and approval in the Batch Discharge Tanks. The primary treatment process employed is filtration.</p> <p>The products of F-502 treatment are a filter cake and filtered liquid.</p> <p>Filter aids such as diatomaceous earth, or similar may be used to precoat the filter cloths and/or as body feed by mixing into the waste slurry prior to waste filtration, to enhance filtration by improving the quality of the filtrate and reducing the liquid content of the filter cake.</p> <p>A batch is started by sealing the filter press. An aqueous slurry of filter aid such as diatomaceous earth, or similar may then be pumped into F-502 to precoat the filter cloths. Next waste slurry is pumped into F-502. Pumping of the waste slurry continues until a rapid rise in inlet pressure or a significant drop in filtration rate indicates that the filter press is full of filter cake. At this point, waste feed is stopped by closing the waste feed valve. Compressed air may then be fed into F-502 to minimize the liquid content of the filter cake.</p> <p>F-502 is opened at the end of each batch and the filter cake is emptied into portable containers or hoppers.</p>
PHYSICAL DESCRIPTION	The F-502 system consists of the following equipment Filter press F-502A. Filter Press F-502A is a Sperry Type 21 (or similar) plate and frame filter press with 27 frames. Each

	frame is 48" x 48" x 1.5". The total filter cake capacity is 54 cubic feet.
MAXIMUM CAPACITY	F-502A has a capacity of 54 cubic feet of filter cake per batch.
WASTES COME FROM	Wastes come to this unit from: M-1 Treatment Unit M-2 Treatment Unit M-11 Treatment Unit Wastewater Physical Separation Unit Batch Discharge Tanks Storage & Treatment Tanks Container Receiving & Inspection Unit Container Storage Unit West Loading & Unloading Rack for Bulk Liquids other than Acids (pH \geq 4 only) Off-site Generators
WASTE GO TO	Filtrate from F-502 can go to the: M-1 Treatment Unit M-2 Treatment Unit M-11 Treatment Unit Wastewater Physical Separation Unit Wastewater Polishing Unit Batch Discharge Tanks Storage & Treatment Tanks Container Storage Unit West Railcar Loading & Unloading Unit Loading & Unloading Rack for Bulk Liquids other than Acids (pH \geq 4 only) Off-site Treatment and/or Disposal Filtercake from F-502 can go to the: Container Storage Unit West Consolidation of Solids & Sludges Unit Bulk Solids Storage Unit Railcar Loading & Unloading Unit Off-site Treatment and/or Disposal
RCRA AIR EMISSION STANDARDS	Must comply with Article 28, Chapter 14, Division 4.5, Title 22 Cal Code Regs 66264 Subpart CC.
WASTE TYPE	Pumpable wastes with solids.

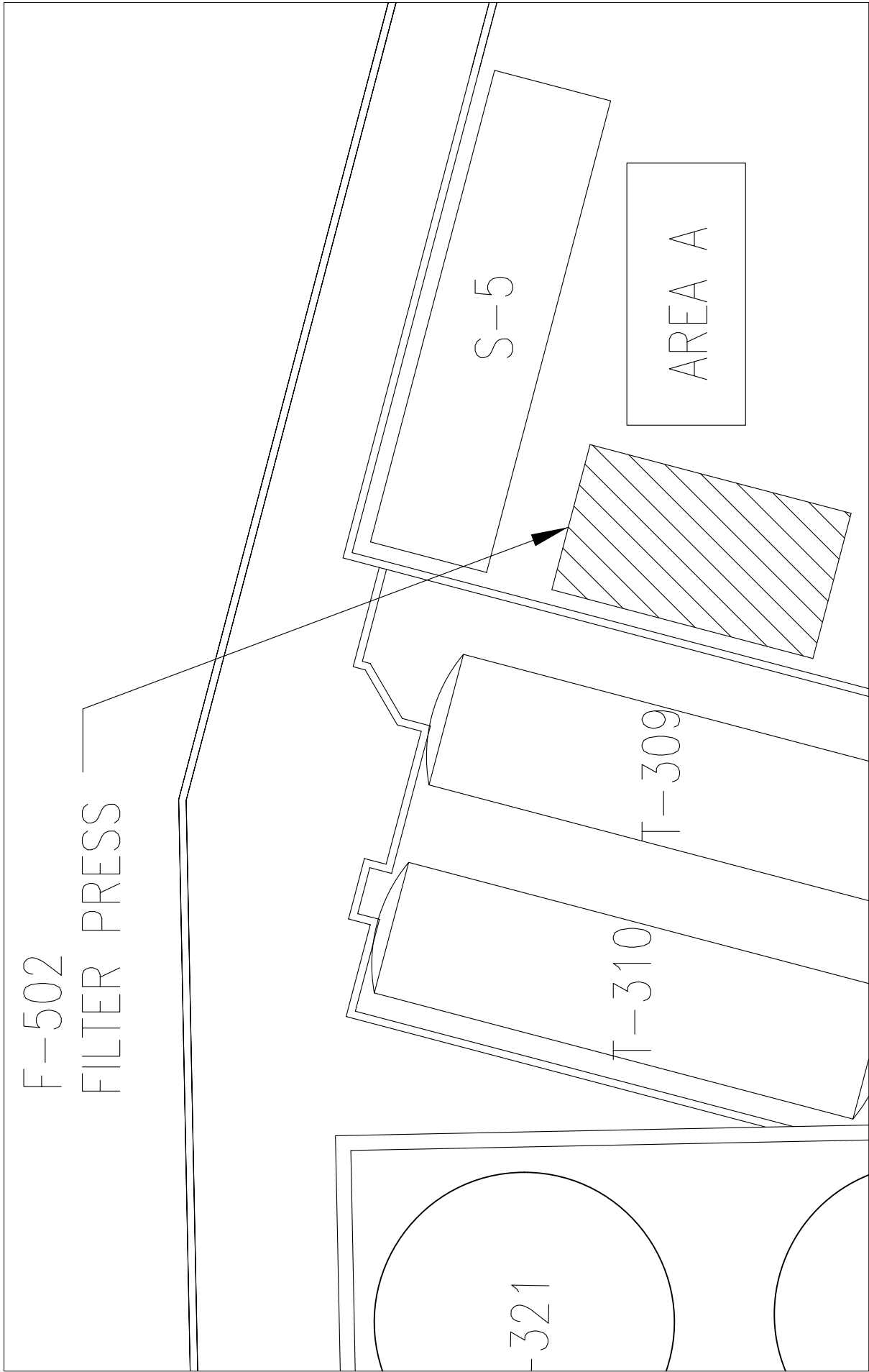
	<p>These wastes include metal and salt bearing wastes from the metal plating, finishing, and electronics industries; wastes from equipment cleaning and de-scaling activities, including tanks, containers, heat exchangers, vessels, etc.; from various maintenance and industrial activities; wastes from contaminated storm water, groundwater, spill clean-ups, remediation, and pollution control devices; alum, gypsum, lime and phosphate sludges; photochemical and photo processing wastes; waste chemicals (aged, surplus, or off-specification) which contain solids, and other similar wastes from other similar sources.</p> <p>Oily wastes with solids, used oil, waste oil and water mixtures, fuel and water mixtures, and waste glycols from vehicles, tanks, sumps, bilges, and other equipment cleaning; various maintenance, industrial, and remediation activities, and other similar wastes from other similar sources.</p>
<p>RCRA AND NON-RCRA HAZARDOUS WASTE CODES</p>	<p>The tanks in this unit may only be used to store or treat the types of wastes listed above that are identified by any of the following RCRA and non-RCRA waste codes:</p> <p style="text-align: center;">RCRA:</p> <p>D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D020, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D031, D032, D033, D034, D035, D036, D037, D038, D039, D040, D041, D042, D043</p> <p>F006, F007, F008, F009, F010, F011, F012</p> <p>K002, K003, K004, K005, K006, K007, K008, K048, K049, K050, K051, K052, K061, K062, K069, K071, K084, K086, K088, K106</p> <p>P010, P011, P012, P013, P021, P029, P030, P063, P074, P076, P078, P098, P099, P104, P106, P113, P114, P115, P119, P120, P121</p> <p>U032, U134, U135, U144, U145, U146, U151, U204, U205, U214, U215, U216, U217</p>

	NON-RCRA: 121, 122, 123, 131, 132, 133, 134, 135, 141, 162, 171, 172, 181, 213, 214, 221, 222, 223, 241, 251, 252, 271, 272, 281, 291, 311, 331, 341, 342, 343, 351, 352, 411, 421, 431, 441, 451, 461, 471, 491, 521, 541, 551, 561, 581, 612, 711, 721, 722, 723, 724, 725, 726, 727, 728, 741, 751
UNIT SPECIFIC SPECIAL CONDITIONS	None

F-502 Treatment Unit



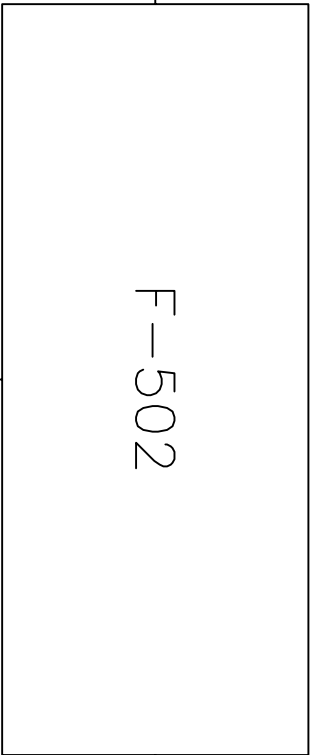
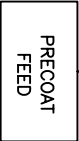
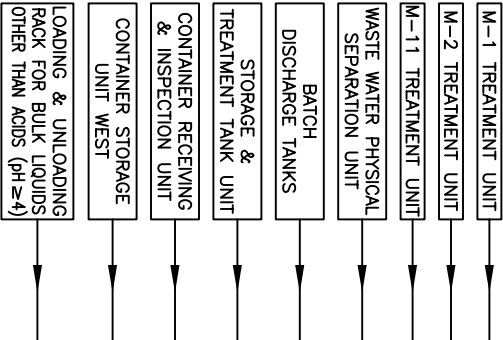
F-502 FILTER PRESS



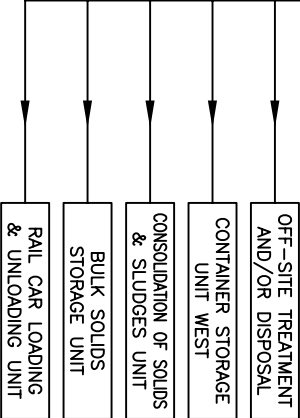
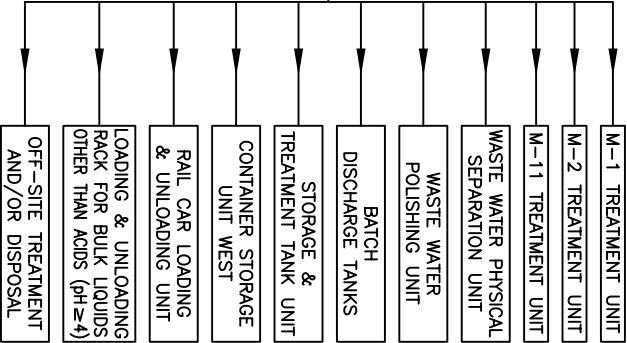
REV	DATE	REVISION	CHK	APP
NC	4/24/2004	INITIAL RELEASE, KS 4/24/04-AV		

DE ENVIROMENTAL		VERNON		CALIFORNIA	
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TREATMENT UNIT		DATE:		4/24/2004	
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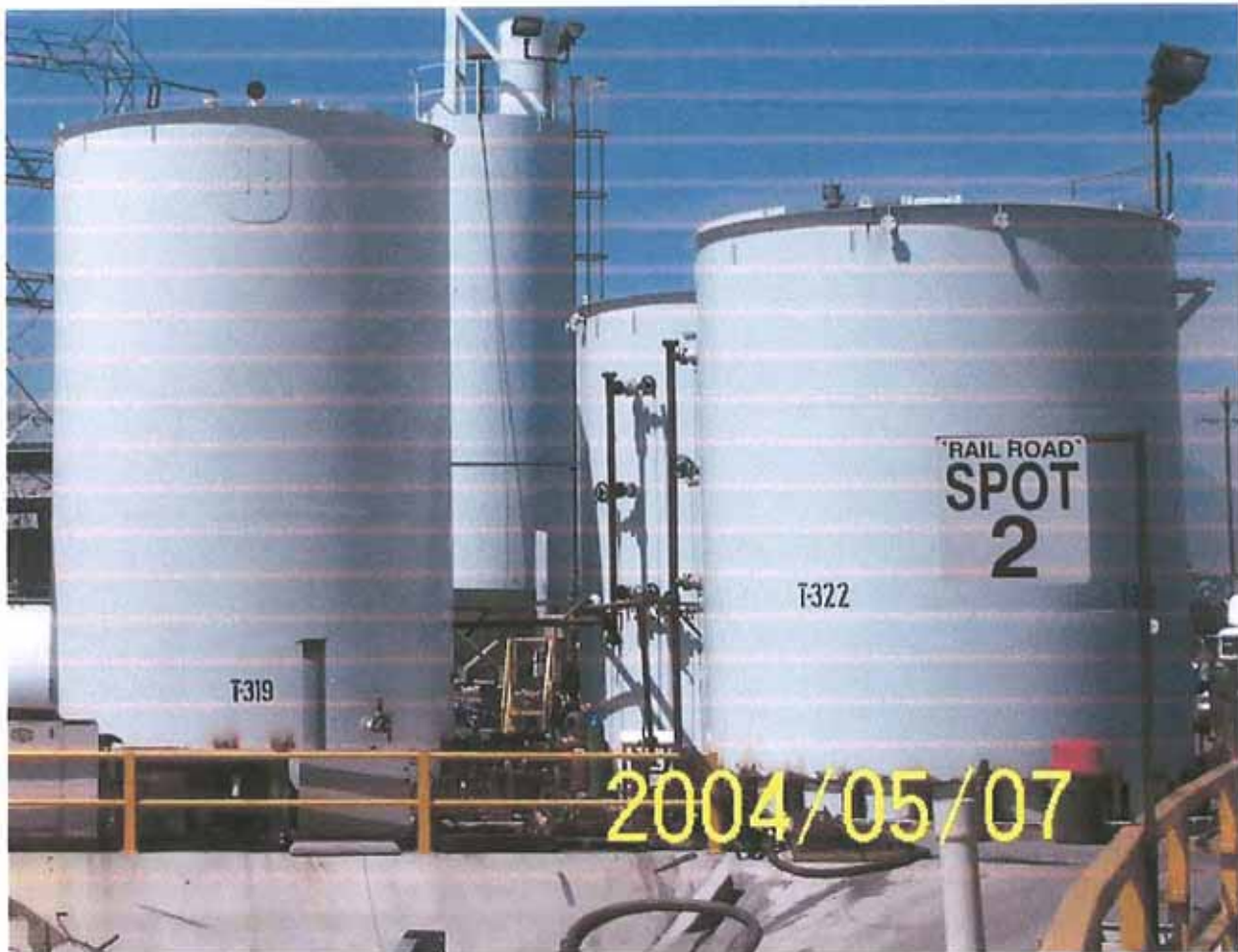


VERNON				ENVIRONMENTAL				CALIFORNIA			
DWG TITLE:				INITIAL PFD				DWG #:			
F-502 TREATMENT UNIT								DKE_404			
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AV				4/22/2004				1			
								REV.			
								B			
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				NC				4/22/04			
				A				5/20/04			
				B				7/7/05			
ALL INFORMATION ON THIS DRAWING IS TO BE CONSIDERED AS CONFIDENTIAL AND PRIVILEGED INFORMATION.				INITIAL RELEASE, 4/22/2004-AV				UPDATED PER REDLINE, 5/20/2004-AV			
								UPDATED PER REDLINE, 7/7/2005-CT			

UNIT NAME	Non-Hazardous Water Tanks
LOCATION	Tanks Tank T-318 (future), T-319, T322, T-323 are located within Tank Farm A.
ACTIVITY TYPE	<p>Primarily consolidation of non-hazardous wastes and gravity separation.</p> <p>Storage in tanks (filtration, gravity separation) and truck and container unloading and loading.</p>
ACTIVITY DESCRIPTION	<p>Trucks unloaded directly to tanks T-319, T-322, and T323, or unloaded through basket strainers into tanks T-319, T-322, and T-323.</p> <p>Tanks T-319 through T-323 provide the residence time necessary for the gravity separation of any oil, solids, and water prior to treatment in other on-site units, or shipment off site.</p> <p>The aqueous phase decanted may be treated in the Wastewater Physical Separation Unit.</p> <p>Periodically, solids are removed from these tanks, typically when they are removed from service for maintenance or internal inspection.</p> <p>Solids from the basket strainers, and any tank cleanout are transferred to other on-site treatment units, or shipped off-site.</p>
PHYSICAL DESCRIPTION	The Non-Hazardous Water Tank system consists of the following equipment: Tanks T-319, T-322, T-323, and future Tank T-318.
MAXIMUM CAPACITY	<p>T-318 (Future) is a S02/T01 (storage in tanks) with a capacity of 72,912 gallons.</p> <p>T-319 is a S02/T01 (storage in tanks) with a capacity of 72,912 gallons.</p> <p>T-322 is a S02/T01 (storage in tanks) with a capacity of 47,460 gallons.</p> <p>T-323 is a S02/T01 (storage in tanks) with a capacity of 47,460</p>

	gallons.
WASTES COME FROM	Wastes come to this unit from: Railcar Loading & Unloading Unit Off-site Generators
WASTE GO TO	Wastewater from the Non-Hazardous Tank Unit can go to the: Wastewater Physical Separation Unit Wastewater Polishing Unit Off-site Treatment and/or Disposal Solids & Sludges from the Non-Hazardous Tank Unit can go to the: F-501 Treatment Unit F-502 Treatment Unit Consolidation of Solids & Sludges Unit Bulk Solids Storage Unit Railcar Loading & Unloading Unit Off-site Treatment and/or Disposal
RCRA AIR EMISSION STANDARDS	Must comply with Article 28, Chapter 14, Division 4.5, Title 22 Cal Code Regs 66264 Subpart CC.
WASTE TYPE	Groundwater, storm water, remediation, bilge water, rinse wash waters, and other similar wastes from other similar sources.
RCRA AND NON-RCRA HAZARDOUS WASTE CODES	The tanks in this unit may only be used to store or treat the types of wastes listed above that are identified as non-regulated / non-hazardous. RCRA: RCRA Waste is not Permitted in these tanks. NON-RCRA: Non-RCRA Waste is not permitted in these tanks.
UNIT SPECIFIC SPECIAL CONDITIONS	None

Non-Hazardous Water Tanks

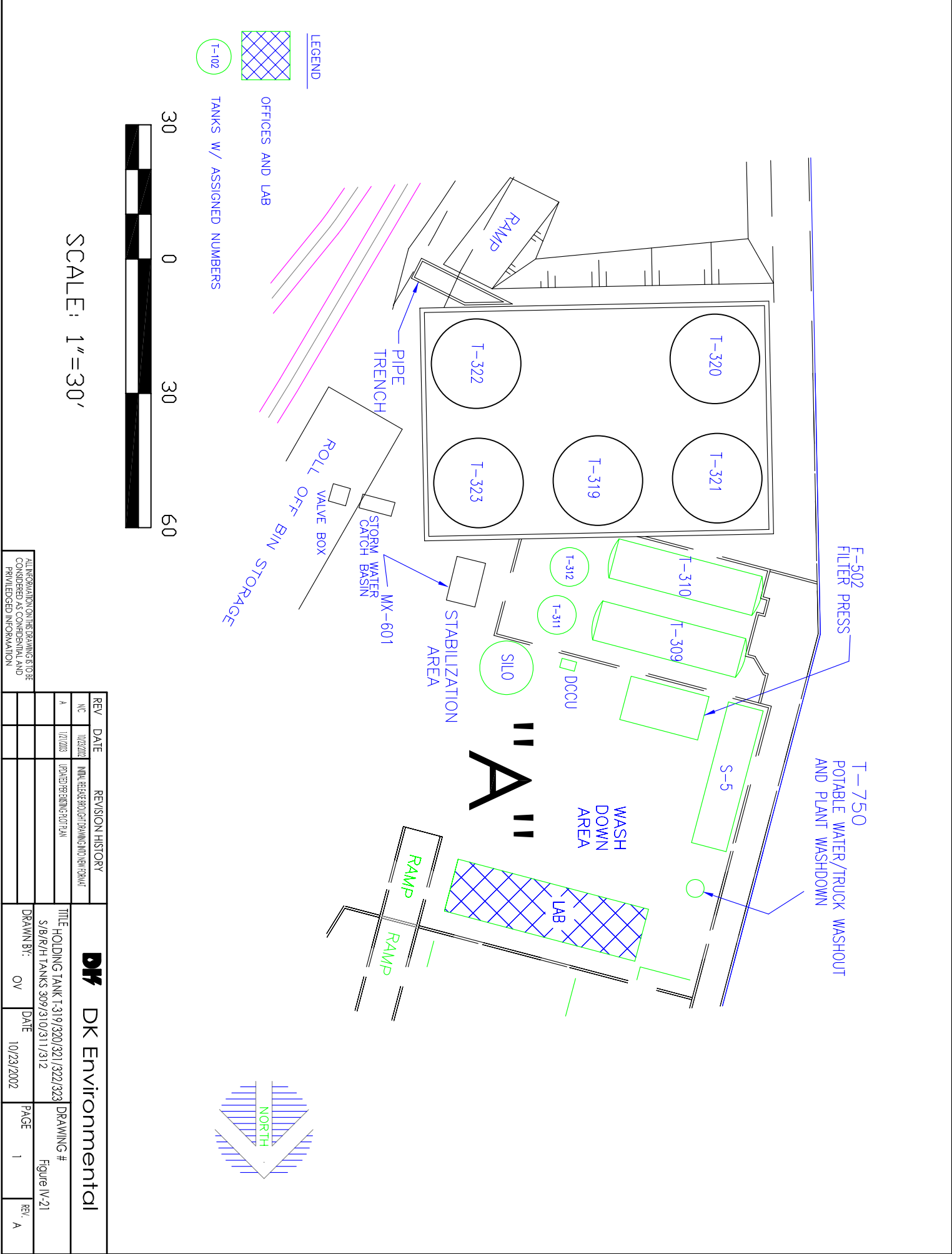


Tanks T-319 & T-322 are currently Non-Hazardous Water tanks.

Non-Hazardous Water Tanks

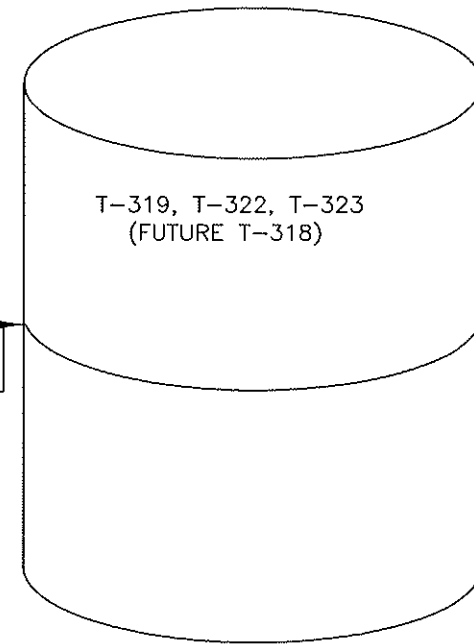
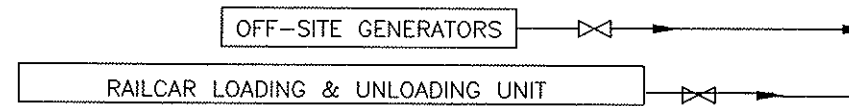


Tanks T-322 & T-323 are Non-Hazardous Water Tanks.



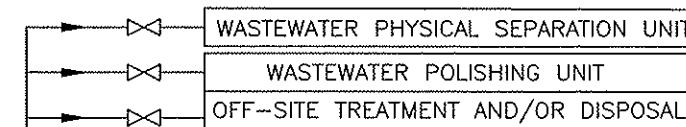
WASTES COME FROM

WASTES COME TO THIS UNIT FROM:

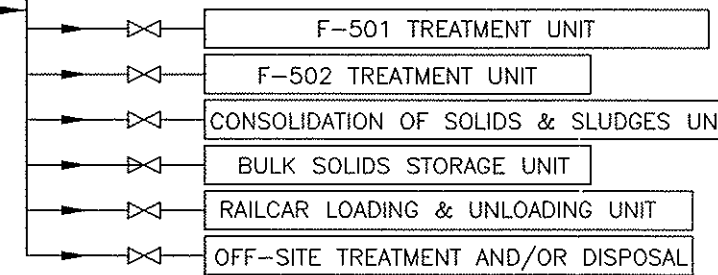


WASTES GO TO:

WASTEWATER FROM THE NON-HAZARDOUS
TANK UNIT CAN GO TO THE:



SOLIDS & SLUDGES FROM THE NON-HAZARDOUS
TANK UNIT CAN GO TO THE:



SCALE: NONE

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INFORMATION.

REV	DATE	REVISION	CHK	APP
NC	4/20/04	INITIAL RELEASE, 4/20/2004-AV		

DK ENVIRONMENTAL		CALIFORNIA	
VERNON		DWG #:	
DWG TITLE: INITIAL NON-HAZARDOUS TANK UNIT		DKE_444	
DRAWN BY: AV	DATE: 4/20/2004	PAGE: 1	REV. NC

UNIT NAME	Wastewater Physical Separation Unit (WPS)
LOCATION	The Wastewater Physical Separation Unit is located in Area B. The location of this equipment and the boundary of this waste management unit are shown in Figure IV-9 (Initial).
ACTIVITY TYPE	DAF-401; Treatment in tanks (dissolved air flotation, chemical treatment) CPI-401; Treatment in tanks (corrugated plate separation, chemical treatment) CPI-402; Treatment in tanks (corrugated plate separation, chemical treatment) D-401; Treatment in tanks (air dissolving) D-402; Treatment in tanks (dissolved air flotation) D-403; Treatment in tanks (oil receiving) D-404; Treatment in tanks (effluent receiving) D-702; Treatment in tanks (effluent receiving) D-705; Treatment in tanks (effluent receiving) D-728; Treatment in tanks (equalizing) Sump 10; Treatment in tanks (blending/composition equalization)
ACTIVITY DESCRIPTION	The Wastewater Physical Separation Unit removes suspended and emulsified oils, dissolved metals and suspended solids from wastewaters being pretreated. Chemically pretreated wastewater is fed to Equalizing Drum D-728, then is introduced into the bottom of the coagulation cell in the center of the Dissolved Air Flotation separator DAF-401. Recycled water saturated with air under pressure from the air dissolver drum D-401 (see below) is also introduced into the coagulation cell to provide the small air bubbles that attach to and float the coagulated oil and solids (the flock) to the upper surface. The floating flock is scraped

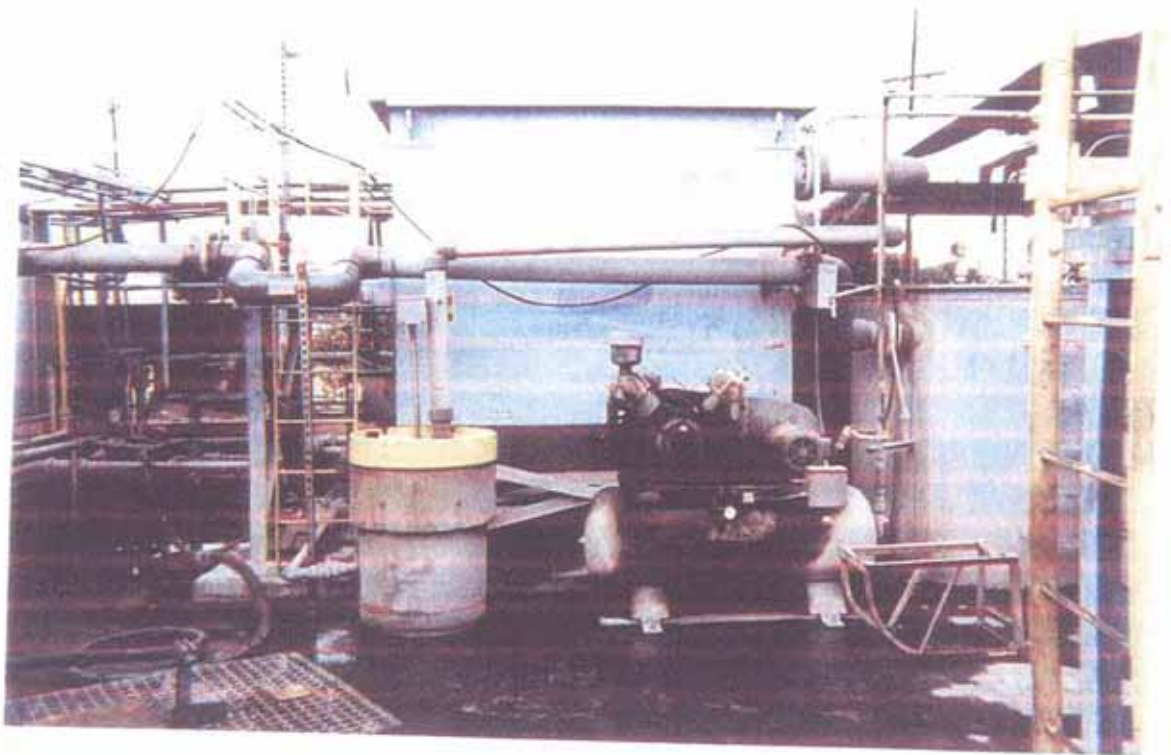
	<p>off the surface by rotating paddles and drained to the DAF float receiver D-402. Clarified water from DAF-401 is transferred to Effluent Receiver D-705. A portion of the clarified water from D-705 is recycled to the air dissolver drum D-401, where the wastewater is mixed with compressed air to saturate the wastewater with air under pressure. The air-saturated wastewater from D-401 flows into the coagulation cell of DAF-401, where it depressurizes and forms the small bubbles that attach to and float the coagulated oil and solids.</p> <p>Chemically pretreated wastewater can be fed to Corrugated Plate Interceptor CPI-401. Oil that separates floats to the top and is transferred to Oil Receiver D-403. Solids and sludge settle to the bottom. The clarified water is removed from the center and transferred to Effluent Receiver D-702. CPI-401 may be used in parallel with DAF-401, or in series prior to or after DAF-401.</p> <p>Chemically pretreated wastewater can be fed to Corrugated Plate Interceptor CPI-402. Solids and sludge settle to the bottom. The clarified water is removed from the top and transferred to Effluent Receiver D-404. CPI-402 may be used in parallel with DAF-401 or in series after DAF-401.</p> <p>Sump 10 is used for composition equalization of wastewater prior to further chemical treatment within Storage and Treatment Tanks Unit tanks, and then subsequent treatment in DAF-401.</p>
<p>PHYSICAL DESCRIPTION</p>	<p>The WPS system consists of the following equipment, all of which are above ground:</p> <p>CPI-401 - Corrugated plate interceptor separator, carbon steel, sloped bottom.</p> <p>CPI-402 - Corrugated plate interceptor separator, carbon steel, sloped bottom.</p> <p>DAF-401 - Dissolved Air Flootation (DAF) separator, carbon steel, flat bottom.</p> <p>D-401 - Air dissolver drum, carbon steel, dished head (top and bottom).</p>

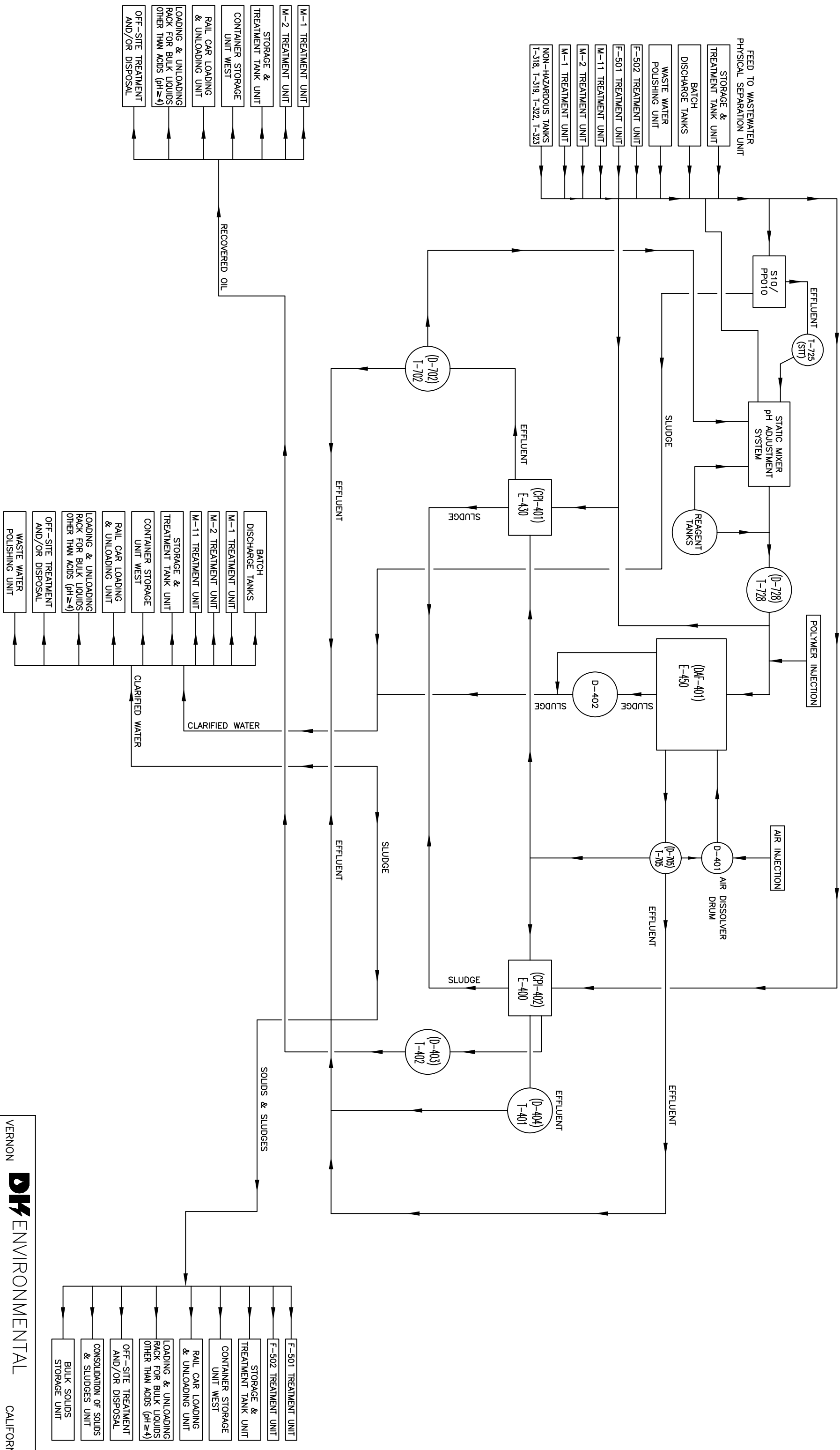
	<p>D-402 - DAF Float receiver, carbon steel, cone bottom.</p> <p>D-403 – Oil Receiver, cross-linked polyethylene, flat bottom.</p> <p>D-404 – Effluent Receiver, carbon steel, flat bottom.</p> <p>D-702 – Effluent Receiver, carbon steel, flat bottom.</p> <p>D-705 – Effluent Receiver, FRP, flat bottom.</p> <p>D-728 – Equalizing Drum, FRP, flat bottom.</p> <p>Sump 10 is a fiberglass sump that sits in a concrete sump. The fiberglass sump provides primary containment for waste, while the concreted sump provides secondary containment. Note: Sump 10 is not 100 percent above ground. Partially above/partially below grade. Waste/open inlet is above grade of containment walls so no run in.</p>
MAXIMUM CAPACITY	<p>DAF-401; 157 GPM T04 (other treatment), based on the DAF capacity at 2 GPM per square foot of surface area.</p> <p>CPI-401; 100 GPM T04 (other treatment).</p> <p>CPI-402; 100 GPM T04 (other treatment).</p> <p>Sump 10; T01 (Treatment in tanks) maximum capacity of 1,885 gallons.</p>
WASTES COME FROM	<p>Wastes come to this unit from:</p> <ul style="list-style-type: none"> M-1 Treatment Unit M-2 Treatment Unit M-11 Treatment Unit F-501 Treatment Unit F-502 Treatment Unit Wastewater Polishing Unit Batch Discharge Tanks Storage & Treatment Tanks
WASTE GO TO	<p>Waste Oil from the WPS can go to the:</p> <ul style="list-style-type: none"> M-1 Treatment Unit M-2 Treatment Unit M-11 Treatment Unit F-501 Treatment Unit F-502 Treatment Unit

	<p>Storage & Treatment Tanks Container Storage Unit West Railcar Loading & Unloading Unit Loading & Unloading Rack for Bulk Liquids other than Acids (pH \geq 4 only) Off-site Treatment and/or Disposal</p> <p>Clarified water from the WPS can go to the: M-1 Treatment Unit M-2 Treatment Unit M-11 Treatment Unit Wastewater Polishing Unit Batch Discharge Tanks Storage & Treatment Tanks Container Storage Unit West Railcar Loading & Unloading Unit Loading & Unloading Rack for Bulk Liquids other than Acids (pH \geq 4 only) Off-site Treatment and/or Disposal</p> <p>Solids & Sludges from the WPS can go to the: F-501 Treatment Unit F-502 Treatment Unit Storage & Treatment Tanks Container Storage Unit West Consolidation of Solids & Sludges Unit Bulk Solids Storage Unit Railcar Loading & Unloading Unit Loading & Unloading Rack for Bulk Liquids other than Acids (pH \geq 4 only) Off-site Treatment and/or Disposal</p>
RCRA AIR EMISSION STANDARDS	Must comply with Article 28, Chapter 14, Division 4.5, Title 22 Cal Code Regs 66264 Subpart CC.
WASTE TYPE	<p>"See Waste Comes From"</p> <p>The Wastewater Physical Separation Unit does not receive off-site waste directly. It continues the pretreatment process started in other on-site treatment and storage units</p>
RCRA AND NON-RCRA HAZARDOUS WASTE CODES	The tanks in this unit may only be used to store or treat the types of wastes listed above that are identified by any of the following RCRA and non-RCRA waste codes:

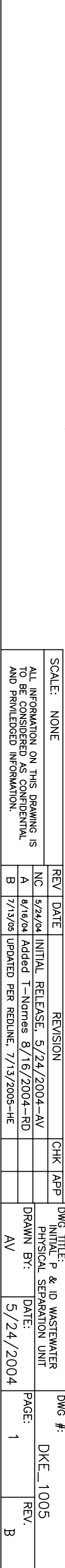
	<p>RCRA:</p> <p>“See Waste Comes From”</p> <p>NON-RCRA:</p> <p>“See Waste Comes From”</p>
UNIT SPECIFIC SPECIAL CONDITIONS	None

Wastewater Physical Separation Unit





SCALE: NONE ALL INFORMATION ON THIS DRAWING IS TO BE CONSIDERED AS CONFIDENTIAL AND PRIVILEGED INFORMATION.	REV	DATE	REVISION	CHK	APP	DWG TITLE: INITIAL PFD WASTE WATER PHYSICAL SEPARATION UNIT	DWG #:	DKE_405	
	NC	4/22/04	INITIAL RELEASE, 4/22/2004-AV						
	A	5/20/04	UPDATED PER REDLINE, 5/20/2004-AV						
	B	8/16/04	Added T-Names, 8/16/2004-RD						
	C	7/13/05	UPDATED PER REDLINE, 7/13/2005-HE						
						DRAWN BY: AV	DATE: 4/22/2004	PAGE: 1	REV. C



DWG TITLE: INITIAL P & ID WASTEWATER PHYSICAL SEPARATION UNIT		DWG #: DKE_1005	
DRAWN BY: AV	DATE: 5/24/2004	PAGE: 1	REV. B

[illegible]

UNIT NAME	Wastewater Polishing Unit (WPU)
LOCATION	Within Area B. The location of this equipment and the boundary of this waste management unit are shown in Figure IV-10 (Initial).
ACTIVITY TYPE	<p>CA-401; Treatment in tanks (activated carbon adsorption, filtration).</p> <p>CA-402; Treatment in tanks (activated carbon adsorption, filtration).</p> <p>KS-1; Treatment in tanks (activated carbon adsorption, filtration).</p> <p>KS-2; Treatment in tanks (activated carbon adsorption, filtration).</p> <p>CA-1; Treatment in tanks (activated carbon adsorption, filtration).</p> <p>CA-2; Treatment in tanks (activated carbon adsorption, filtration).</p>
ACTIVITY DESCRIPTION	<p>The Wastewater Polishing Unit utilizes activated carbon adsorption to remove dissolved organics and metals from wastewaters typically being pretreated prior to eventual discharge to the LACSD after being tested in the Batch Discharge Tanks.</p> <p>The Wastewater Polishing Unit does not receive off-site waste directly. It continues the pretreatment process started in other on-site treatment and storage units, primarily the Wastewater Physical Separation Unit, the Solvent Wastewater Storage & Treatment Unit, M-1, M-11, F-501, F-502, and other tanks.</p> <p>Wastewater from other on-site treatment and storage units (except wastewater from the Solvent Wastewater Receiving and Storage Unit) and storm water and wash water from containments and the facility storm water basin can be pumped through any combination of the six carbon adsorbers. Wastewater discharged from the carbon</p>

	<p>adsorbers is transferred to the Batch Discharge Tanks or other on-site treatment or storage units for testing prior to transfer to the Batch Discharge Tanks, further treatment, or shipment off site.</p> <p>Wastewater from the Solvent Wastewater Storage & Treatment Unit can only be pumped through carbon adsorbers CA-1 & CA-2 and back to one of the Solvent Wastewater Storage & Treatment Unit tanks for testing prior to transfer to a Batch Discharge tank, for re-treatment in CA-1 or CA-2, or for shipment off-site.</p>
PHYSICAL DESCRIPTION	CA-401 through CA-2 are all vertical, carbon steel process vessels that may contain up to 200 cubic feet of activated carbon each.
MAXIMUM CAPACITY	410 GPM T04 (other treatment), based on operating the carbon adsorbers as three parallel pairs at 10 GPM per square foot.
WASTES COME FROM	<p>Wastes come to this unit from:</p> <ul style="list-style-type: none"> M-1 Treatment Unit M-2 Treatment Unit M-11 Treatment Unit F-501 Treatment Unit F-502 Treatment Unit Wastewater Physical Separation Unit Batch Discharge Tanks Solvent Wastewater Storage & Treatment Unit (into CA-1 and CA-2 of WPU only) Storage & Treatment Tanks
WASTE GO TO	<p>Pretreated wastewater from the Wastewater Polishing Unit can go to the:</p> <ul style="list-style-type: none"> M-1 Treatment Unit M-2 Treatment Unit M-11 Treatment Unit Wastewater Physical Separation Unit Batch Discharge Tanks Solvent Wastewater Storage & Treatment Unit Storage & Treatment Tanks Container Storage Unit West

	<p>Railcar Loading & Unloading Unit Loading & Unloading Rack for Bulk Liquids other than Acids (pH \geq 4 only) Off-site Treatment and/or Disposal</p> <p>Spent Carbon from the Wastewater Polishing Unit carbon adsorbers can go to the: Container Storage Unit West Consolidation of Solids & Sludges Unit Bulk Solids Storage Unit Railcar Loading & Unloading Unit Off-site Treatment and/or Disposal</p> <p>Spent Recycled (concentrated) Brine from the Membrane Filtration Unit can go to the: M-1 Treatment Unit M-2 Treatment Unit M-11 Treatment Unit Wastewater Physical Separation Unit Storage & Treatment Tanks Container Storage Unit West Consolidation of Solids and Sludges Unit Railcar Loading & Unloading Unit Loading & Unloading Rack for Bulk Liquids other than Acids (pH \geq 4 only) Off-site Treatment and/or Disposal</p>
RCRA AIR EMISSION STANDARDS	Must comply with Article 28, Chapter 14, Division 4.5, Title 22 Cal Code Regs 66264 Subpart CC.
WASTE TYPE	"See Waste Comes From" The Wastewater Polishing Unit does not receive off-site waste directly. It continues the pretreatment process started in other on-site treatment and storage units.
RCRA AND NON-RCRA HAZARDOUS WASTE CODES	<p>The tanks in this unit may only be used to store or treat the types of wastes listed above that are identified by any of the following RCRA and non-RCRA waste codes:</p> <p style="text-align: center;">RCRA:</p> <p>"See Waste Comes From"</p>

	NON-RCRA: "See Waste Comes From"
UNIT SPECIFIC SPECIAL CONDITIONS	None

Wastewater Polishing Unit



KS-1 & KS-2

Wastewater Polishing Unit

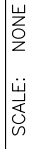


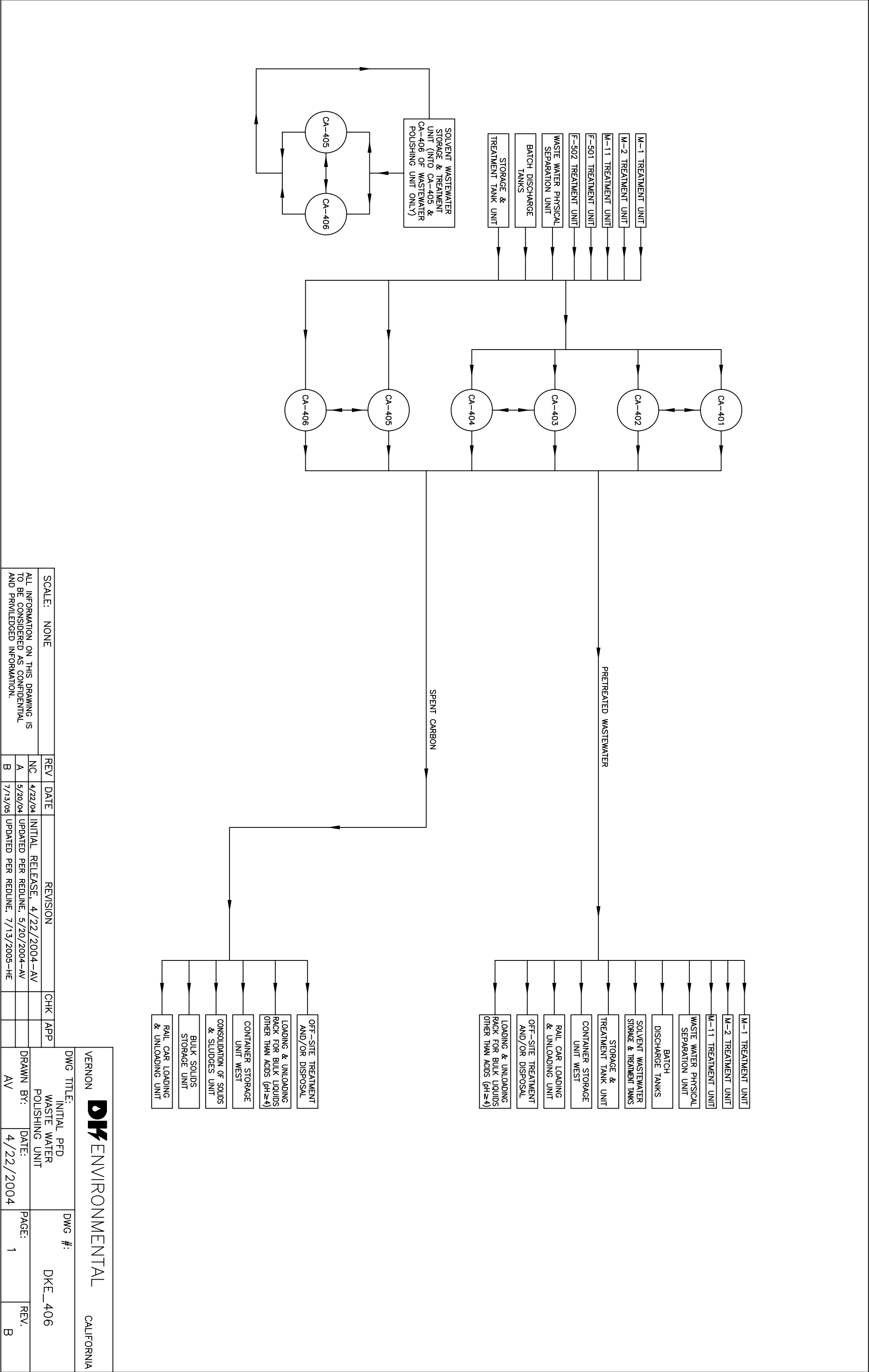
CA-401 & CA-402

Wastewater Polishing Unit

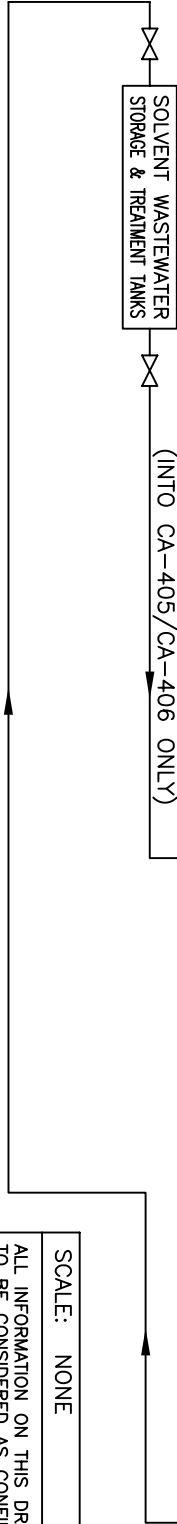
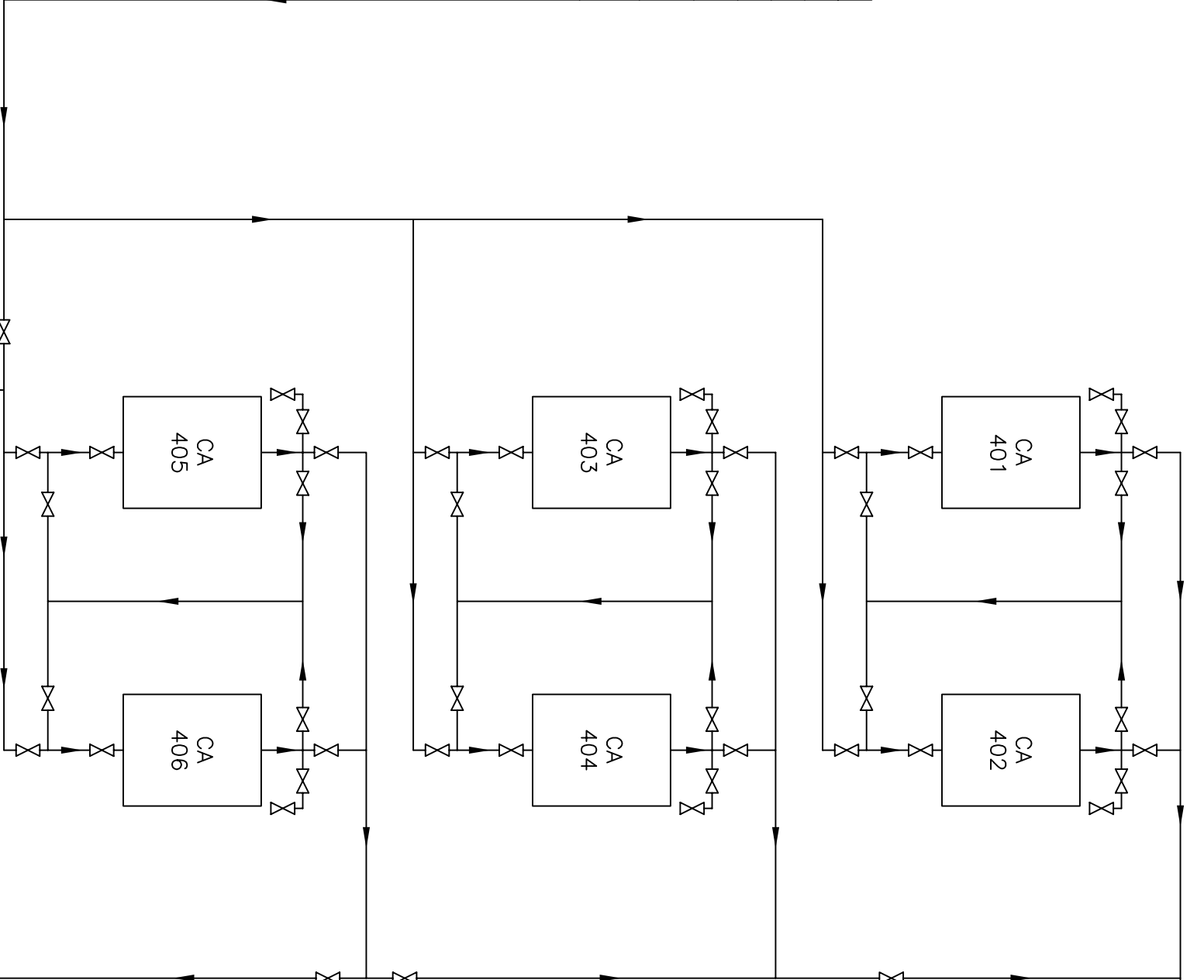
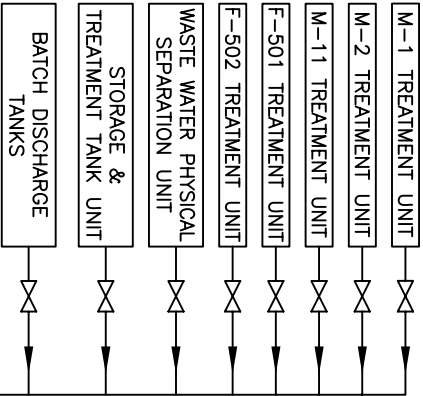


CA-1 & CA-2

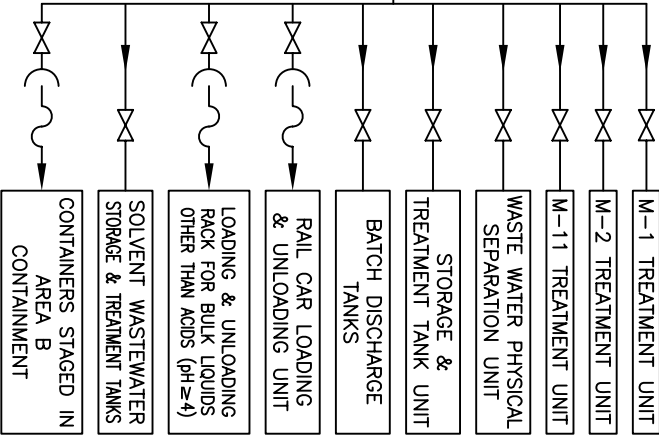
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VERNON				ENVIRONMENTAL				CALIFORNIA			
DWG TITLE:				INITIAL PFD				DWG #:			
WASTE WATER				POLISHING UNIT				DKE_406			
DRAWN BY:				DATE:				PAGE:			
AV				4/22/2004				1			
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SCALE: NONE				REV				DATE			
ALL INFORMATION ON THIS DRAWING IS TO BE CONSIDERED AS CONFIDENTIAL AND PRIVILEGED INFORMATION.				NC				4/22/04			
				A				5/20/04			
				B				7/13/05			
				INITIAL RELEASE, 4/22/2004-AV							
				UPDATED PER REDLINE, 5/20/2004-AV							
				UPDATED PER REDLINE, 7/13/2005-HE							



PRETREATED WASTEWATER




NOTE:
ALL PIPING IS SCHEDULE 80 PVC

REV	DATE	REVISION	CHK	APP
NC	5/24/04	INITIAL RELEASE, 5/24/2004-AV		
A	7/13/05	UPDATED PER REDLINE, 7/13/2005-HE		

SCALE: NONE

ALL INFORMATION ON THIS DRAWING IS TO BE CONSIDERED AS CONFIDENTIAL AND PRIVILEGED INFORMATION.



ENVIRONMENTAL

VERNON CALIFORNIA

DWG TITLE:
INITIAL P & ID WASTE WATER POLISHING UNIT

DWG #:
DKE_1006

DRAWN BY:
AV

DATE:
5/24/2004

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